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April 1996
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Editor's letter

No sooner were my words in last month's letter printed than all the ground rules were changed again. On the cover disc you can read Acorn's own press releases about their joint venture with Apple.

This was heralded in some quarters as Acorn abandoning RISC OS in favour of Mac OS, curiously in the same way that the announcement about Acorn selling PCs gave rise to claims that Acorn were embracing DOS to the exclusion of all others.

Neither is true, of course. Acorn Education now becomes a total one-stop shop and has vowed to support RISC OS, while Peter Bondar (head of ART, now *Acorn Risc Technology*) wonders why people are so fast to assume that RISC OS is dead — he wants the power that RISC OS and half a dozen StrongARM chips will give him.

And so do I.

Steve Turnbull

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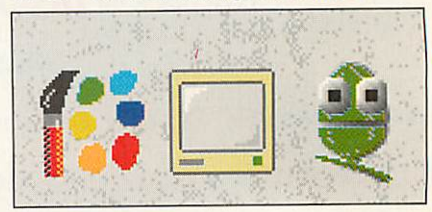
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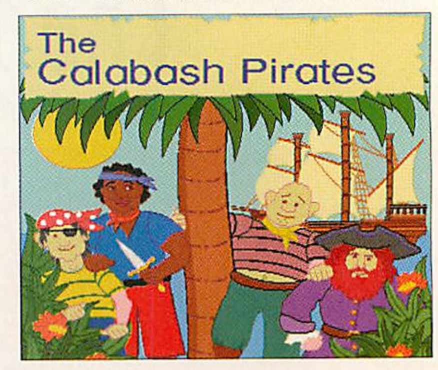


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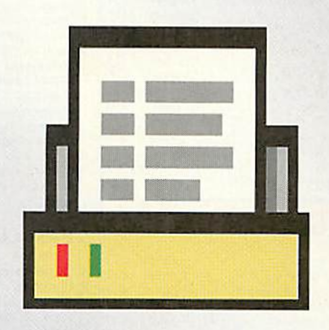


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Sunday 19 May 1996
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- David Dade explains how Bulletin Boards work and reviews BBS packages that you can use.
- Alex Singleton does a round up of available clip-art and software that's designed to make it accessible.
- Bruce Goatly checks out the latest genealogy program from Minerva, Ancestry 2.
- Plus all the regular features





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News

Acorn and Apple join forces

To some, the unthinkable has happened — Acorn is to collaborate with Apple in the education market. To others, Acorn has made a wise and brave move to ally with Apple. By early April, the product of the alliance — a new Cambridge-based company aimed at developing information technology solutions for the UK education market — will begin operations.

The as-yet unnamed company, jointly owned by Acorn and Apple, will be headed by Brendan O'Sullivan while Acorn's managing director, David Lee, will become chairman of the board.

Some will suggest Acorn and Apple were forced in to a marriage of convenience — both are performing poorly in an education market which has seen spectacular successes for both in the past. Both face a common enemy in the form of the IBM-compatible PC.

Although Acorn will continue to sell and develop its proprietary ARM-based RISC OS computers, the long term future for Acorn now looks like being down the PowerPC path already being trodden by Apple. This dovetails neatly with Acorn's publicly stated interest in PowerPC hardware and its relationship with IBM, which is one of the three main PowerPC protagonists, the others being Apple and Motorola.

RM, Acorn's long-time rival in the education field, issued a remarkable press release in response to the Acorn/Apple news which suggested that the end of RISC OS had been signalled and RM's chief executive, Mike Fischer, was even quoted as saying it was a sad event. With hundreds of thousands of RISC OS machines already in use up and down the land, RISC OS is not just going to disappear overnight. Acorn is not going to stop selling RISC OS computers overnight, either. Acorn Risc PCs and A7000s remain formidable competitors to RM and any other PC clones.

Acorn's message is that the RISC OS market for third party vendors and developers is still there and will last indefinitely. After all, Acorn's overall market is calculated to be worth a couple of hundred million overall. There is no need to panic. In fact there are some exciting developments to come, with the introduction of ARM800 and StrongARM processors later this year.

There is also a possibility that ARM power and RISC OS could live on in the form of a plug-in co-processor for PowerPC machines in the future. No doubt, Simtec or Aleph One or such-like will develop a PowerPC co-processor for the Risc PC too!

RISC OS also remains at the heart of developments within ART and Online Media for Oracle's new Network Computer and Online Media set top boxes.

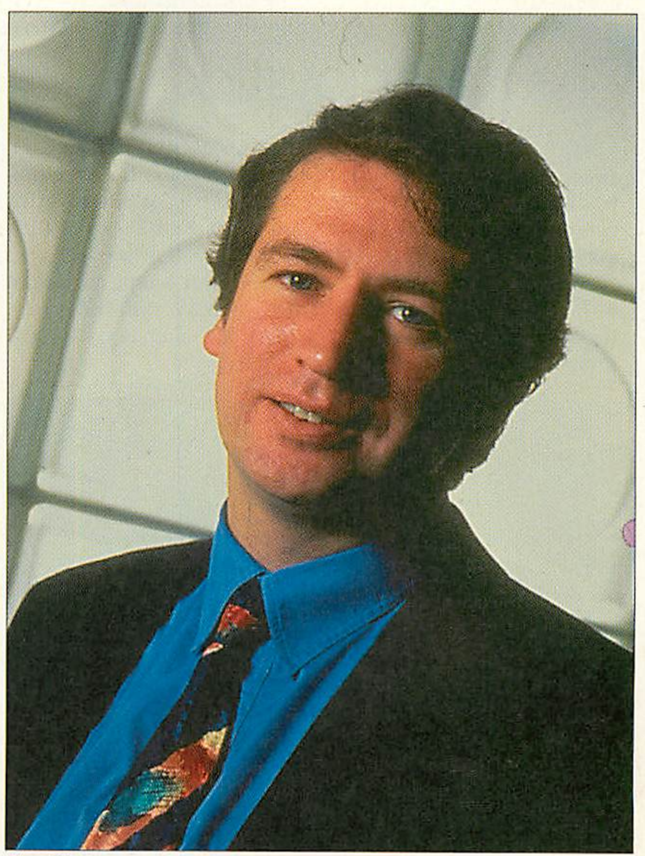
Far from RM's hopes of an overnight death of RISC OS, Acorn and Apple emphasise that the new company will actively sell and support the Risc PC and A7000 alongside other established Acorn products like the Pocket Book, SchoolServer products, etc. and they will remain Acorn branded. At the same time, Apple Power Macintosh, Performa, PowerBook, Newton and other Apple-branded products will be marketed and supported alongside Acorn's products by the new company.

The long term goal of the company is to adopt the latest PowerPC hardware platform. Part of this specification is a future version of Apple's Mac OS. Acorn and Apple will actively work to develop technologies which will see closer inter-operability between Acorn and Apple technologies.

Brendan O'Sullivan commented: "Acorn and Apple share a similar vision and commitment to the education market. Acorn and Apple's heritage in education means that our education customers, software developers and reseller partners can expect increased investment in sales,



Brendan O'Sullivan



Nigel Turner



marketing and solutions from the new joint venture company.

"The political consensus that is beginning to form around the need for integrating technology in learning means that the new copmany is ideally placed to advise, influence and deliver on government initiatives in UK education."



Acorn's managing director, David Lee, commented: "This joint venture creates a major new force which will take educational IT in the UK into a new generation of development. The new company will provide a planned migration path, enabling users to make a smooth and logical transition from current to future technologies.

"Consequently, schools may continue to purchase Acorn or Apple systems as best suits them and will be able to incorporate new generation systems alongside their existing IT provision, confident in the knowledge that they are making a sound investment in the future of educational IT."

To some extent, Acorn and Apple users have seen it all before. The change from 8-bit BBC Micros to the new 32-bit Archimedes saw old and new computers working side by side for a long time. Apple users are still undergoing a transition from 68000-based Macs to the newer PowerPC-based machines introduced two years ago.

Both will be presented with new PowerPC platforms sooner or later and while Apple users will have an easier time in adopting the new platform, it won't be a simple exercise. In the meantime, Acorn and Apple want to help users and developers to be aware of what's to come and, where necessary, be prepared for eventualities.

The new company will replace existing marketing structures within the prospective donor companies. Acorn Education agencies and Apple Computer UK education resellers will be invited to apply for agencies representing the new company. Both companies suggest their channel structures are surprisingly complementary.

Acorn developers will be encouraged to port their wares to Mac OS. At the same time, RISC OS customers will continue to provide demand for native products. This may seem one-sided — Mac developers aren't going to be actively encouraged to port their products to RISC OS — but it is logical as the future Power PC platform will be based around a derivative of the current Mac OS.

That we won't see RISC OS endowed with any major enhancements from now on is half true. The fact that Sun's Java Internet language is currently being ported to RISC OS for the Oracle project demonstrates that RISC OS will continue to benefit from enhancements.

New versions of RISC OS will also be required when the StrongARM processor family comes on-line. However, it is fair to say that the Acorn/Apple deal probably means there will be no further radical developments of core RISC OS workings, but if you examine the history of the development of RISC OS, this was practically an inevitability at this stage.

Whether or not Acorn and Apple's joint education company succeeds remains to be proven. That the two company's are determined to make a go of it, there is little doubt — Acorn's recent Learning Without Limits and MediaRange initiatives are proof of this. The new PowerPC platform will eventually furnish the new enterprise with a serious PC competitor, but in the meantime, it will be fascinating to see how fruit and the nut work together.



The Roller joystick

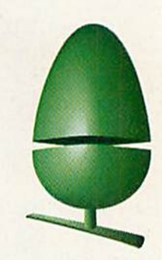
SEMERC have had much success with their Roller trackball, but not everyone gets on with tracker balls.

For those who don't, there is an answer – SEMERC's new Roller Joystick. Fitted with its optional soft knob, the joystick is easier to use if you have muscular difficulties. Unfortunately, the precision mechanism of the joystick means it isn't cheap at £199 + VAT.

Soft ball knobs are priced £15 + VAT. SEMERC, tel: 0161 627 4469, fax: 0161 627 2381.



Olivetti relinquishes majority control of Acorn



Olivetti has reduced its share holding in Acorn to just 45.9 per cent. At the end of February Olivetti sold 10 per cent of its Acorn shares to Chancellor Capital Management Inc. in the US. Apparently there is considerable interest Internet surfing opportunities, in the US, hence the deal. This left Olivetti with a 48.4 share in Acorn.

Shortly afterwards a group of UK investors negotiated a further acquisition of 2.15 million shares from Olivetti, reducing Olivetti's share in Acorn to 45.0 per cent. Hermann Hauser, ex co-founder of Acorn, is reported to have sold 1.6 million shares as well.

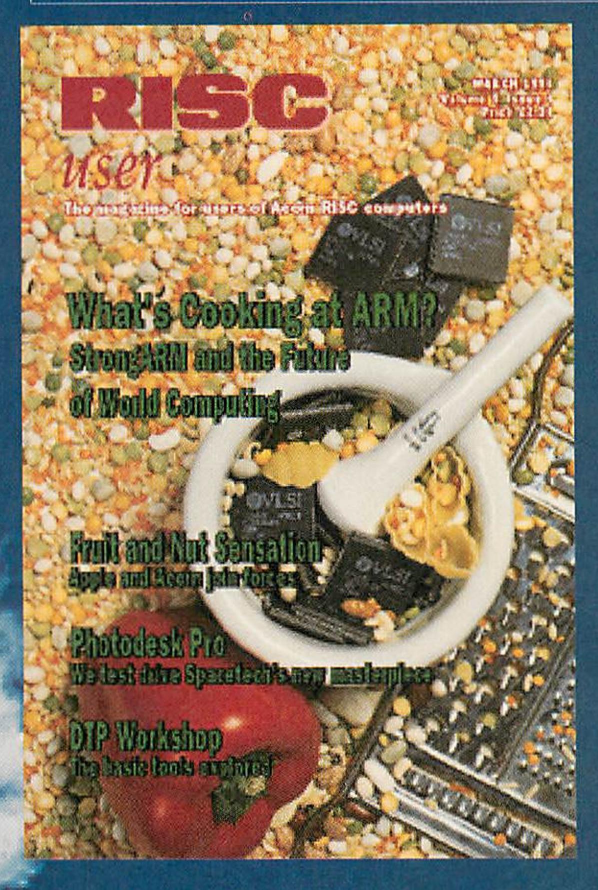
Marco de Benedetti, head of Olivetti's Telemedia division, of which Acorn is a member, commented: "In recent months Acorn has been forging new and interesting alliances with global technology companies such as Oracle and Apple and these developments have aroused interest in Acorn from institutional investors both in the UK and internationally.

"In this context, I believe it is appropriate and in the interests of Olivetti to reduce its share holding to below fifty per cent while remaining a committed long-term shareholder and supporter of the company." Acorn has also welcomed the news, backing up De Benedetti's comments that Acorn's increased visibility could lead to more alliances.

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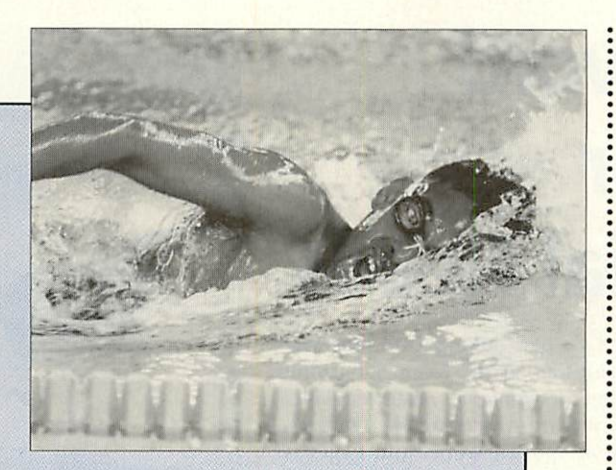


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Essential swimming CD ROM

It had to come eventually – a CD ROM to teach you to swim. This Yorkshire International Thomson Multimedia (YITM) title Essential Steps to Swimming has received a key endorsement from champion swimmer Adrian Moorhouse MBE and is approved by a number of swimming associations. The CD features video clips on different swimming techniques and pool safety and is aimed at both novice and experienced swimmers. Animated colour graphics demonstrate how you float and how your arms and legs act as levers, pushing you through the water. Essential Steps to Swimming is available as a dual-format PC/Acorn CD ROM and is priced £53.58 + VAT. YITM, tel: (0113) 243 8283, fax: (0113) 243 4884.

JAVA processors to challenge ARM?

Everyone is Java-mad at the moment — not least Acorn and Oracle as Java will be a core component of Oracle's new Acorn-developed and ARM-based NCs. Sun Microsystems originally invented the Java Internet application programming language, and its microprocessor division, Sun Microelectronics, estimate that the Java phenomenon will lead to a networked microprocessor market topping $15 billion by the year 2000.

Sun is in the business of making big, powerful and very expensive RISC processors, called SPARCs for graphics workstations and system servers. Now, Sun says it has developed a family of slimline SPARCs optimised specifically for running Java. Sun has also promised they will be cheap and consume little power. That could be bad news for ARM; low cost/low power is ARM's motto. The boffins will also tell you that without a maths co-processor, an ARM7500-based NC is not going to make the most of Java.

The word from ARM is that they are unabashed by Sun's claims. ARM leads the MIPS/watt stakes by a wide margin and 7500 chips are as little as $25 a throw in big enough quantities. The other fact is that ARM 7500s exist today and Sun's new chips won't even be available as samples until later this year.

Compared to an ARM, Sun SPARCs are monster chips and are reckoned to cost twenty times and upwards the 7500 target price. SPARCs glow when they run too, so power consumption will be a tough problem for Sun to deal with. SPARC is not the most admired RISC architecture, either. Nevertheless, Sun's picoJava, microJava and UltraJava chips will be based on scaled down SPARCs with architecture optimisations for running Java.

While remaining un-phased by Sun's announcement, ARM is signalling that it is not resting on its laurels. ARM has been quietly figuring out an internal roadmap for development of the ARM architecture in the direction of Internet surfers, among other things. ARM's alliance with Digital, which has produced the StrongARM, should help ensure the ARM architecture can respond to challenges from competitors like Sun.

A recent Sun statement read: "Industry analysts estimate that the overall microprocessor and microcontroller market will top $60B by the year 1999," stated Rajesh Parekh, Sun Microelectronics' Embedded Products Group vice president and general manager. "Today the average business person harbours more than 10 microcontrollers.

"By 1999, the average home will contain between 50 and 100 microcontrollers. And worldwide there will be more than 145 million cellular phone users — each with at least one microcontroller. The result? Millions of cellular phones, security systems, entertainment systems, low-cost network terminals, and other internet appliances operating within a network and highly optimized for small applications or applets running at top speed."

ARM would certainly agree with that, but Sun will have to fight for its share.

New software for your XOB teletext card

Users of the XOB Tele-Card teletext podule can now grab teletext sub-titles in real-time using some new utility software which XOB is making available free of charge to its customers. The software is being bundled with the latest release of the Tele-Card's standard software. One suggestion is that you can capture sub-titles of a programme to effectively construct a pseudo script for that show. You can also use the software for investigating how new teletext services like PDC (programme deliver control) work. Single-user cards are priced £152 + VAT, including teletext frame editing features. Network server versions of the card are also available. XOB, tel: 01307 840 364, e-mail: telecard@xobs.demon.co.uk

Clubbing in Derby

DARC, the Derby Acorn Risc Club, is to hold its inaugural meeting on the evening of Monday April 15th at the Church Hall of St Augustine in Duffield, just off the A6 on the Little Eaton Road. The meeting starts at 7:30PM and guest speaker is none other than ART's Chris Cox who looks after Clan Acorn. Future meetings will be held on the second Monday of each month. For more details, contact acting chairman Mike Smith, tel: 01629 540281.

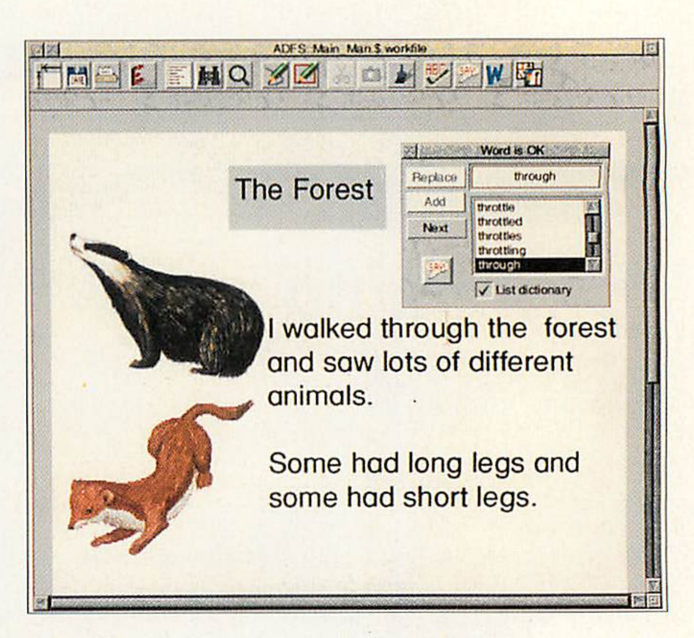
Electricity and circuits for kids

Camboard Technology produces Simple Circuits, a combined software and hardware educational package, exclusive to Acorn computer users, designed to introduced the concepts of electricity and electrical circuits to key stage 2 students. The software shows how to build circuits using supplied components and then quizzes students on their results. A site licence for Simple Circuits is now available, priced £49.95 + VAT, including one hardware pack. Single users can upgrade to a site licence for £20 + VAT. Camboard Technology, tel/fax: (01223) 264512, e-mail: 101320,447@compuserve.com, World Wide Web: http://www.ourworld.compuserve.com:80/homepages/camboard/



Talking word processor for Special Needs

SEMERC showed Pages (£49 + VAT), a new talking word processor designed to help special needs children, at the recent Education Show at the Birmingham NEC. Pages resembles an on-screen paper and pencil case, but offers many word processor-like features. Typed text can be played back as spoken words and Pages is compatible with SEMERC's other word processor, Phases. Also featured on the stand were Maths Frames (£39 + VAT), a package for building pictorial scenes using numbers and the award-winning letter formation helper, Claude and Maud (£36 + VAT). SEMERC, tel: 0161 627 4469, fax: 0161 627 2381



Oracle shows NC prototype

Oracle has shown an industrial design prototype for its Network Computer. Unfortunately, photos of the prototype, designed by Frog Design — which has worked with Apple in the past — weren't very clear and there isn't a lot we can tell you about it. In fact, ART chief, Peter Bondar, told Acorn User that it was unlikely that Oracle would want get into the business of building NCs itself, instead it's licensing its designs to third parties in typical manufacturing centres like the Far East.

Acorn User has also learned that Oracle has demonstrated a working NC prototype to developers based on Acorn technology, though the job of porting the Sun Java language to the RISC OS-based operating system has not yet been completed.

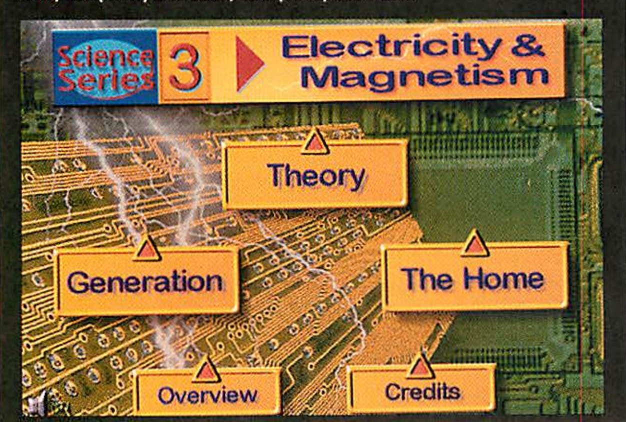
Sibelius hits the headlines again

Is there no escape from Sibelius mania in the press? The latest clipping – half a page of it – comes from The Times on Wednesday January 31st. The article interviewed the brains behind the Sibelius music composition package, Finn twins, Jonathan and Ben, with regard to the proposition that Sibelius has changed the way composers do their work for ever. If that wasn't enough, the same issue of The Times saluted the brothers in a leader article for producing a "device to which the music world should be indebted."

Just to round off another busy month for Sibelius Software, a new 'baby' version of Sibelius has been released. The new £49 + VAT Junior Sibelius package was launched at the recent Education Show and is aimed at music novices. Sibelius Software, tel: (01223) 302765, fax: (01223) 351947, e-mail: info@sibelius.demon.co.uk, World Wide Web: http://www.acorn.co.uk/sibelius/

New CDs from YITM at the Education Show

Yorkshire International Thomson Multimedia (YITM) showed several new CD ROM titles for Stage 1&2 and 3&4 students at the recent Education Show in Birmingham. Titles included Late Victorians (£79 + VAT) - part of the How We Used to Live series, Unterwegs (£79.99 + VAT) - translated as 'on the way' for 11-16 year old German language students, plus two editions of the for Stage 1&2 and 3&4 students, respectively. The primary edition of the Electricity and Magnetism CD ROM is priced £59.99 + VAT and the secondary version £79.99 + VAT. YITM, tel: (0113) 243 8283, fax: (0113) 243 4884.



The first Acorn telecottage?

Thilmcraft in Dereham, Norfolk, the local Acorn dealer, believe they have set up the first ever Acorn telecottage, the Dereham Digital Centre. Hilary Pegg, business partner, explains: "We began dealing in Acorns because we use an Acorn in our desktop publishing business and, like other Acorn enthusiasts, we feel we must stand up for RISC technology." Through the Telecottage Association, the Dereham Digital Centre was formed to serve clients all over the local area. You can't get much closer to the ideal of a telecottage at the Dereham Digital Centre - it is located in a flintnapped converted stables. The centre functions as facility for scanning, printing, Internet access, telephone answering, etc., with a firm village community bias. Now Hilary and her husband, Tim, are looking for sponsors to help them develop TeleWork Norfolk, a regional group of the national Telecottage Association. Dereham Digital Centre, tel: (01362) 691690, fax: (01362) 699664, e-mail: thilm@paston.co.uk, World Wide Web: http://webzone1.co.uk/www/east_anglia_online/index.ddc.htm

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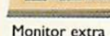


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Computer Concepts Ltd

Gaddesden Place, Hemel Hempstead, Herts, HP2 6EX Tel: 01442 351000 Fax: 01442 351010
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Graphics

Photodesk 2 – Photoshop for the Acorn

PHOTODESK 2, the professional version, as previewed in last month's battle of the bitmap packages, has now entered the final stages of beta release and by the time you read this, it may well be on sale.

I reviewed a much earlier pre-release of the program last month, but the functionality is now complete and running quite smoothly.

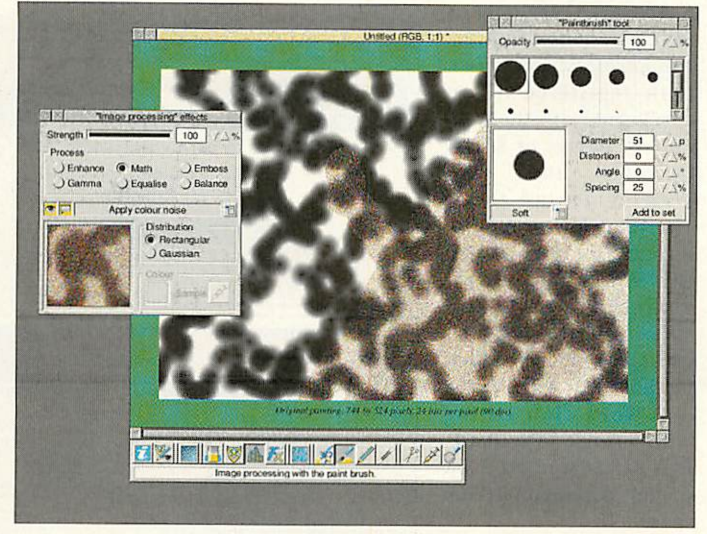
What is most remarkable about the package is the care and attention that has been paid to emulating industry standard facilities that look and behave in the same way as they might in Adobe *Photoshop*, though somewhat smoother on many occasions.

Cutting and pasting are just superb, with floating sections previewable with variable opacity, antialiased and feathered edge options and superbly rendered distortion effects using high-quality bi-cubic smoothing algorithms.

Painting is now very *Photoshop* with antialiasing at every opportunity and many of the effects, new and old can now be previewed, some even in real time, in special viewing windows in which you can pan your image.

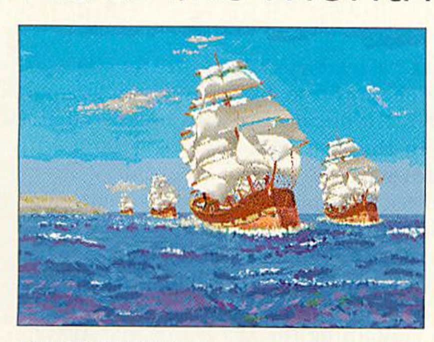
For the professional user, the calibration tables are invaluable and have been integrated into an attractive and friendly interface. There has obviously been a great deal of effort invested in perfecting the art of reproducing the best possible printed image from an RGB original. There are some things that the extremely complex and grossly overpriced software for the Mac and PC currently do that *Photodesk* cannot, but it is very early days.

The package has caught up with the industry and in many ways overtaken it in a matter of months against silly odds. It is such a pity that third parties like Fractal Design would not think of writing plug-ins for the Acorn platform as this would cast dark shadows on *Photoshop*'s standing as the world's best and most comprehensive image processing and editing tool.



Photodesk 2 with its *Photoshop* style preview windows and truly professional processing effects.

Pic of the month





MR S GOREHAM has won the Pic of the Month competition once before with his piece entitled Yacht. Still on a nautical note, Ships is another beautifully painted image accompanied by a more terrestrial Church both created using a program written by a friend of his.

Mr Goreham's ability to produce such fine artwork from a meagre A3000 with 2Mb of RAM continues to astound me but sadly it seems that these are his last two paintings. Mr Goreham, now aged 81 says that his eyesight is not what it used to be and unfortunately, his A3000 has recently packed in. I wonder if there's anyone out there who can help?

So, despite not really entering these pictures for the prize, Mr Goreham wins £20 which may help fix his A3000 and go towards a bigger monitor perhaps. Please remember that every winner gets a free slide recording from the Digital Darkroom.

The Italian job

The Italian creators of the 3D modelling package, *Top Model*, have announced that the all future versions of the program will include the now complete manual and boxing. It is likely that UK distributors will be Spacetech which in my opinion is probably the best company to do the job now that Computer Concepts has gone somewhat AWOL with regard to graphics on the Acorn.

The latest version of *Top Model* has even faster 24-bit rendering and a fixed camera but rotatable scene animation facility. Z-buffering has also been implemented but all the fabulous developments that Sinchronia were promising have been put on hold in the light of the dramatic move made by Acorn to concentrate the sales of RISC OS machines into schools alone. Exciting as their new projects are, I and many others I imagine, will be very disappointed if the professional *Top Model* does not come to fruition in the next year or so.

Sinchronia is now also on the Net. For all those who have written to ask for email, the address is PCPOOL@flower.it.

StrongARM

Already shipping, the StrongARM series of microprocessors are set to shake the world of computing. But will Acorn RISC OS users benefit? I have a feeling that the chips ranging from 100-200MHz (but could certainly manage faster rates) are a great performance breakthrough, but only potentially.

Risc PCs have a bus that is too slow to take full advantage of the chips phenomenal processing power. Having now examined the technical details of the StrongARM, we will need changes to RISC OS and motherboards, plus secondary chip caches and perhaps even Superfast Static RAM on the daughterboard so that the strong ARM will be of any all-round, real-world advantage. Let's hope ART will not disappoint us.

Contacting me

You can contact the graphics and DTP page by writing to me, Jack Kreindler at Acorn User, Media House , Adlington Park, Macclesfield SK10 4NP, or by email to jack@argonet.co.uk.



On the Village Web

THE World Wide Web is wonderful to browse through, giving you limitless information on almost every subject you can think of, opening new vistas on subjects beyond your knowledge, and you can experience this by following links in a purely random way. When looking for something specific though, you need the information gathered together in one place for easy retrieval.

The Acorn Cybervillage is a Web site that aims to do this for Acorn users, and in their own words "provides a one-stop source of information on all things Acorn-related." Although it's by no means the only Web site of Acorn interest, it has some attractive features for both commercial users and club groups or individuals who would like a Web presence.

Acorn Cybervillage is run by *Quantum Software* and *Rheingold Enterprises*, both registered Acorn developers with the well-known names of Stuart Halliday and Alan Wrigley behind them. The hook for non-commercial club users is that the Web space rental charges are half their very reasonable commercial rates. This works out at about £10 a year for a 300 word club listing with a single logo image, and £15 a year for 200K of non-commercial Web space.

The Cybervillage site has direct links to the four Acorn-owned company sites and sections of pages for third-party developer and dealer companies and services, including areas for *Archive* magazine and our BBS friends at the Digital Databank. The CyberLinkage section has direct links to some very useful Acorn documents and selected PD software from around the Internet.

The Cybervillage also features a news section called Heard on the Net, with Acorn-interest items gleaned from around the Internet, such as reports on the Acorn NetSurfer product and editorial comment by Tim Rice (not THE Tim Rice?) which is unusual for such a site. For more information, go to the Acorn Cybervillage home page at:

http://www.cybervillage.co.uk/



Some of the Cybervillagers

Seek and shall ye find?

THE sheer quantity of information available on the World Wide Web makes it difficult to know where to start when you want to find something specific. To narrow the search, you can visit several Web page 'search engine' sites where you to enter key words in a writeable box, and it sends back lists of Web URLs of pages containing your key words for you to follow up.

I tested some of these search sites with key words chosen to find some graphic resources for Web page building.

First I tried the Lycos Catalog of the Internet site at http://www.lycos.cs.cmu.edu/ and my search string was "textures in your own pages" hoping to find some PD graphics page backgrounds.

Lycos (eventually!) returned a list of 120 documents having "textures", "own" and "pages" all on the same page, pointing to useful advice about page building in the first few tens of URLs, but didn't mention Texture Land, which is a site that has 298 textures available free for individual use. Webcrawler at http://webcrawler.com/ found 1,210 documents with useful resource links in the first 25 URLs listed, including Texture Land.

Infoseek at http://www2.infoseek.com/ found 100 titles (it said) and the first page of 10 had plenty of good links to free background material. Infoseek listed Texture Land in its second screen of 10 titles. http://www.yahoo.com/ found 520 pages containing the key words, but Texture Land wasn't shown in the first 50 matches.

Next I tried a Usenet newsgroup message search for references to "arcade bbs". DejaNews at http://www.dejanews.com/ found 1208 pages, but on examination some of these were not relevant, having 'arcade' well separated from 'bbs' by other text.

So to get the best from these Web tools, you need choose your key words quite carefully and always try more than one 'engine'.

Riscy WebGif2

WebGif2 — Ian Jaffray and Riscy Development's latest utility for World Wide Web page designers — is now available. Ported from the work of Tom Boutell in Seattle, Ian's Desktop version creates GIF images from Acorn sprites, with options for interlacing and point-and-click selection of transparency colour. If your Web pages are a drag, this essential tool can transform them at a click! You can download this FreeWare from:

http://www.foobar.co.uk/dialin/ganymede/riscy/

Jolly Roger BBS

Daniel Garrod claims his Jolly Roger BBS as the first Acorn BBS in Cambridge. Online from 6pm to 11pm at the moment, it runs with ArmBBS on a RiscPC 600 and the modem supports calls to 14,400bps. The filebase is growing but more users and uploads are welcome. Jolly Roger has a Fidonet Point address 2:2501/216.2.

Jolly Roger BBS
(01223) 264315

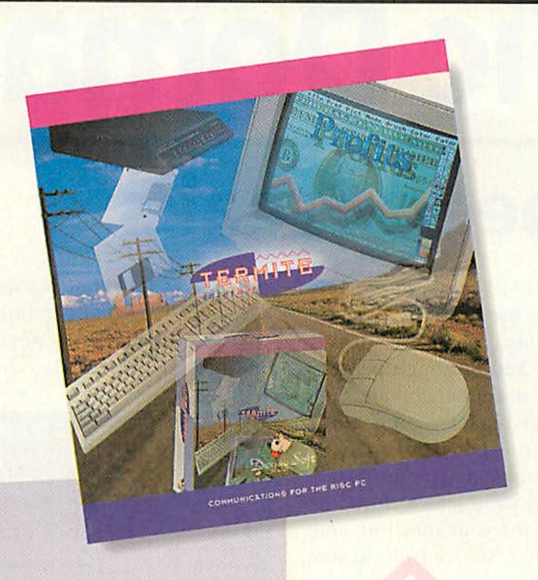
CU-SeeMe for Acorns

Off to Germany now, where Peter Schmidt and the KISS group are working on an implementation of a video-conferencing Internet CU-SeeMe Client for the PD FreeNet stack. The group plan to use the same low cost video camera used in the packages already available for PC and MAC platforms as the video/audio input device. Anybody interested in joining the project should email competer@kiss.de.

Contacting me

Send me any interesting Acorn-interest URLs you find, and I'll publish a monthly selection. You can contact me by writing to David Dade, Acorn User, IDG Media, Media House, Adlington Park, Macclesfield, SK10 4NP, or by e-mail to: DaviD@arcade.demon.co.uk, or mail #2 on Arcade BBS 0181-654 2212.

Join the 'Information Superhighway' with DoggySoft's Termite Internet



Termite is an all-purpose communications package for Acorn RISC OS computers. It gives you access to the vast range of bulletin boards around the world, and to the biggest network of them all — *the Internet*.

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- The ability to connect to other machines on the Internet using *Telnet*, for example you can join in a chat with dozens of people or connect to an Internet bulletin board.
- Miscellaneous useful functions such as *ping, time, traceroute* and *finger*.
- There are also lots of servers included — even a web server, so that while you are connected others can read your own WWW pages.

REQUIREMENTS:

- 2MB RAM minimum (4MB Recommended).
- Risc OS 3 (version 3.10) or later.
- A hard disc drive.
- A Hayes compatible modem (14400bps or greater recommended)

If you wish to use the Internet features you also require a subscription to an Internet provider.

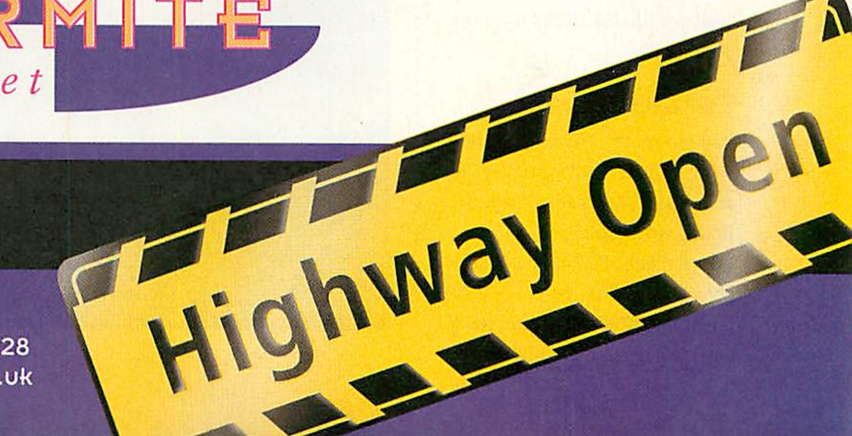
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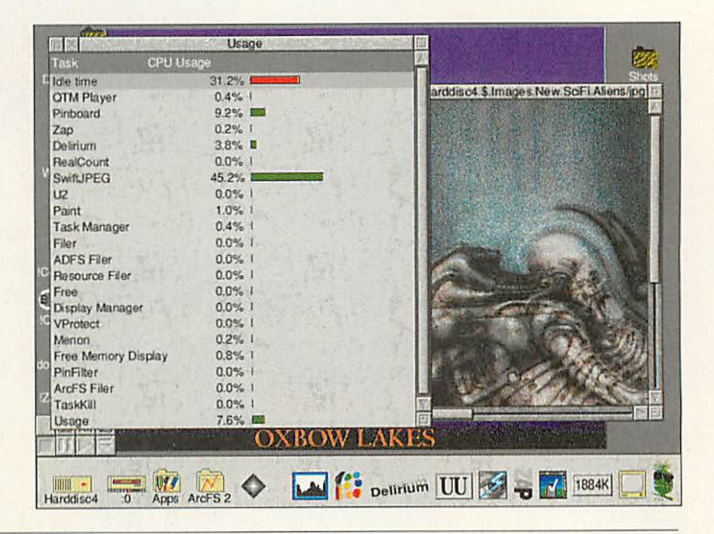


Public Domain

Speed Freaks

PROGRAMS that measure and compare the speed of computers always seem to prove popular and although personally I'm not a benchmark fan, two have recently caught my attention. The first, a new benchmark utility entitled *Bogomip* produces a *Bogomip* readout for your machine and complete C source code so you can make comparisons with other computers. The program is on the Datafile's disk UT249.

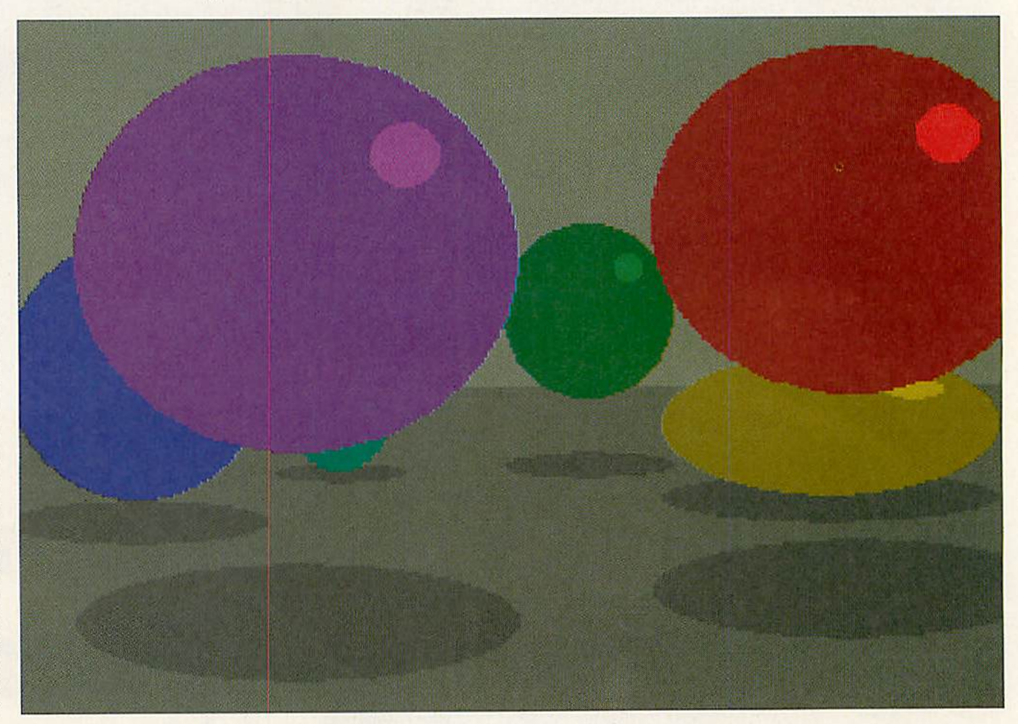
Usage by Ran Mokady offers a Task Manager style window, with the coloured bars representing not memory usage of each desktop task, but processor time used. All these programs suffer from some degree of inaccuracy, due to the amount of time that they themselves take, but it's interesting to see what's gobbling up your processors performance. It could also be a handy tool to check desktop tasks under development. *Usage* is on Hensa, and the Datafile's disk UT49.



Cakehead

A surprise release from a new member of French coding group Arm's Tech, is a welcome addition to anyone's demo collection. *Cakehead* is a little intro by Baah, alias Dracula of Positivity from the old ST scene. The demo features a small number of really nice effects, coded primarily for ARM2 machines, but which still function well on my RPC.

My favourite is the bouncing balls routine where lots of coding cheats, the bread and butter of demo coding, produce a very fast effect. The final effect features some attractive sparkley dot shapes that morph smoothly between designs. Full marks to musician, Cry of Experience for a nice dance tune that accompanies the production. My only complaint is the very abrupt ending to this demo, but apart from that its all rather smart. *Cakehead* is on disk DM146 from the Datafile, and is accessible on the net from the Arm's Tech web pages.



Feedback

Thanks for the excellent response to features in the last few issues, but if I can quickly re-iterate, please email me if possible or include an SAE with any snail-mail letters that require a response. Other than that, I'd be glad to help you out with any problems, or simply hear your comments on the column. In the spirit of the PD scene, please keep contributing!

Graphics appeal

I've had some interesting letters and software sent in after my appeal for graphics programs, some of which will be appearing in the column soon. It seems however that there's a lot of people out there who've produced perfectly good software for themselves or for work or school, and haven't thought of releasing it as PD.

So in case this provides the rest of us with some rather neat PD software, have a think about any programs you may have written that could easily be released as PD. *Acorn User* may even be able to feature them on the cover disc.

Express arrival

This seems such a great issue for news on the growth of our Acorn PD scene. A new German group in the form of Expression has recently moved to the Acorn scene from the C64.

I'll certainly be featuring more software from this talented crew in future issues, but in the meantime, you can already get hold of Expression's first release. 6502-Xass is a cross assembler program allowing 6502 code to be developed in a friendly Acorn environment. 6502-Xass is available on disk UT294 from the Datafile PD.

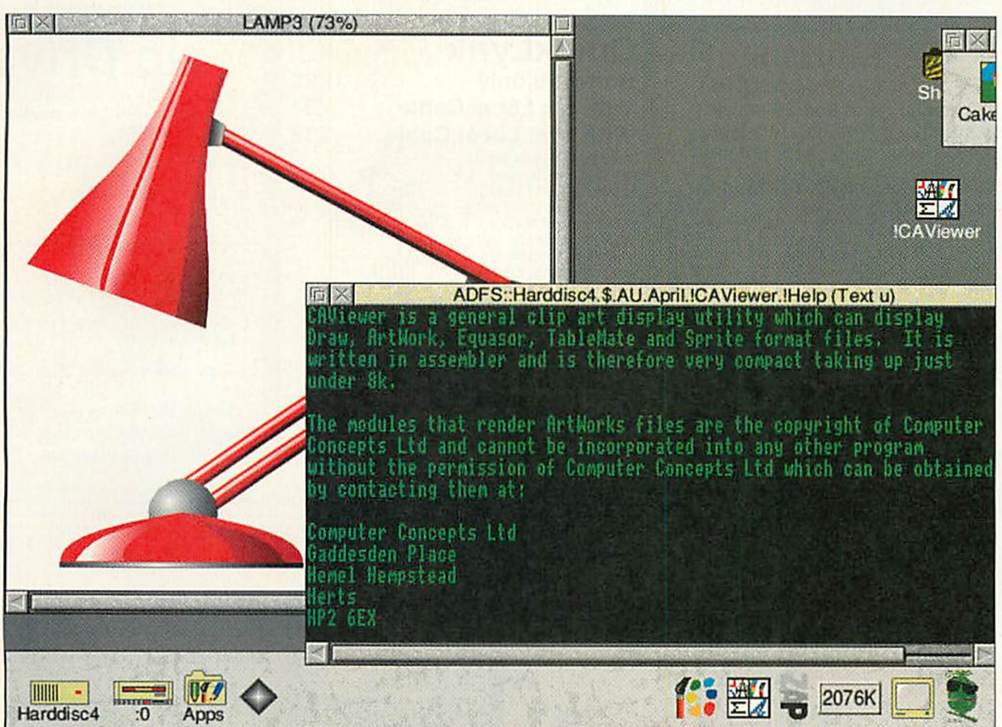
Contacting me

You can contact the PD page by writing to me, Paul Wheatley, at Acorn User, IDG Media, Media House, Adlington Park, Macclesfield, SK10 4NP. Or preferably, by e-mail to quantum@digibank.demon.co.uk.



CAView

CAVIEW is a handy little clip art viewer, which, at a wimpslot of only 16K is hardly a burden to your desktop. The program, by Dean Sivell, provides display windows for any Draw, Sprite, Artworks, Equasor or TableMate files dropped onto the icon bar. Not the most original of programs, but in your boot sequence, its handy none the less. *CAView* can be found at the Datafile PD on disk UT229.



Tetrix

RPC owners, deprived of Sick's version of the classic *Tetris* game under RISC OS 3.6+ should look no further than Excelsior's RPC friendly version, entitled *Tetrix*. There's a scroller and lots of nice parallax clouds, but I have to say it starts off a bit hard for me. *Tetrix* can be found on disk GA077 from the Datafile.

Digital Delusions

DELUSIONS is a new disc magazine produced with Musbury Consultants' Bookbinder multimedia tools, and offers a reasonable first issue. The mag covers all the usual areas for this kind of production, including software reviews and a clubs page. *Delusions* isn't up to the standard of productions like *Spectrum* and a few more articles rather than filling up the disk with boring PD would have been beneficial.

The magazine hopes to remedy this to a certain extent by appealing for software contributions from PD authors. Contributions of articles by readers, would really be more welcome as far as I'm concerned. But to sum up, its not bad for the first issue, and I'll be following the mag's development in future PD columns. For more information on *Digital Delusions*, contact: M. Chatterly, St Margo, Greve D'azette, St Clement, Jersey JE2 6PT.

Hardback

THE Careware utility, *Clickback*, has held the title of best hard disk backup program for quite some time now, but a challenger comes from the compiler of coder Theo Markettos. Theo's *Hardback* program offers a quality, albeit shareware, alternative.

Hardback features all the important controls you need, including provision for compression and goes further in making automatic backups or complete one step file restores easy.

Theo is quick to extol *Hardback's* virtues in comparison with *Clickback*, but at the end of the day, both packages are very comprehensive and deserve a look. The unregistered PD version of *Hardback* is available from the Datafile PD on disk UT281, with the registered version obtainable direct from Theo at: 5 Willow Close, Liphook, Hants, GU30 7HX.

Coder's Revenge

Good news on the German scene front comes fresh from the demo group Archiologics. The 'logics scene mag, previously only available in German, is moving to a multi-lingual release for all us ignorant, English-only speakers. With the potential of the English speaking scene input, the decision to write German-only scene magazines does seem to be a little strange. Let's hope some of the other magazines will follow suit, in a move which many German and English speakers I know, will welcome. More information on availability and content, when the next issue of *Revenge* hits the streets.

Optic

Fibre Optic is a new disc-based magazine featuring a mixture of Acorn related subjects, including the Internet, comms, programming, games and other subjects. *Optic* is available from the Digital Databank BBS, and I'll be covering it in greater depth in a later issue. Contact the author at: jonathang@starnet.demon.co.uk.

Get involved!

There seems to be quite a lot of newcomers to the scene at the moment, with disk magazines being launched left, right and centre. This is exactly what we need right now, so please get out there and help by contributing some articles. Having edited a disc magazine myself for several issues, I know that these things need a lot of reader input. As I keep on saying in *Acorn User*, please get involved.

Figlet

The official web site for the multi-platform email sig program which was reviewed last month, can be accessed at: http://st-www.cs.uiuc.edu/users/chai/figlet.html. Software, as well as access to mailing lists and discussions are all available from this site.

Extreme update

By the time you read this, an update of the *X-Treme* demo will be available from the Arm's Tech web site and the Datafile PD. At the time of writing, I don't know the nature of the update, but I'm hoping for some smoother presentation and linking of the existing high quality effects.

Showroom open Mon-Sat 10-18.00 hrs (All prices exclude VAT) Carriage included except where indicated

CD-ROM

All our CD-ROM's are Multi-Session, PhotoCD, CD-DA, White Book compatible & come complete with data/sound cables, screws & fitting instructions. SCSI drives require an interface with CDFS 2.20 or greater. Driver incl.

Internal Drives

4x Speed ATAPI (IDE) (Tray) £110

This drive can only be used on a RiscPC or A7000 with RiscOS3.6 or later (Add £34+VAT for RiscOS 3.5). No further hardware is required.

2x Speed SCSI (Tray) £110
4.4x Speed SCSI (Tray) DR-U124X £210

PCW Verdict - 'It's extremely quick, and a bargain.'

6.8x Speed SCSI (Tray) 135ms £270

External Drives

2x Speed SCSI (Tray) 275ms £170
4.4x Speed SCSI (Tray) 150ms £260
6.8x Speed SCSI (Tray) 150ms £320

SCSI cards

Morley cached SCSI card £160
Cumana SCSI II card £165
PowerTec SCSI II card £165

Above are suitable for A300, A400, A3000 (Ext+£30), A540, A5000 and RiscPC.

Hard Discs

IDE Bare Drives		SCSI Bare Drives	
635Mb 12ms	£140	730Mb 12ms	£190
850Mb 12ms	£Call	1Gb 12ms	£240
1Gb	£Call	2Gb 12ms	£500

Above are 3½" bare drives only. Please add the relavent accessories from below. Drives are Connor or Quantum. ForA3000/A3010 hard discs see Hard Card section below.

Syquest Removable SCSI Drives

Internal Drives		External Drives	
105Mb Syquest	£150	EZ135Mb Syquest	£199
270Mb Syquest	£259	(Above includes cartr.)	
		105Mb Syquest	£210
		270Mb Syquest	£329

Syquest Cartridges

EZ135Mb Cartridge	£20	105Mb Cartridge	£43
		270Mb Cartridge	£49

Hard Disc Interfaces/Accessories

50-50C SCSI Cable	£10	25-50 SCSI Cable	£10
SCSI II-50C Cable	£25	SCSI Terminator	£10
5¼-3½ open adapt	£10	5¼-3½ HD adaptor	£12
IDE Accessories		**SCSI Interfaces**	
IDE interface	£79	Morley Cached	£160
2nd Hard Drive Kit	£15	Cumana SCSI II	£165
External case/PSU	£79	PowerTec SCSI II	£165

TopicArt

Single disc clipart containing approx. 50 high quality draw format clip art images, each on a single subject. Comes with mono reference sheet. 20 subjects are available now. Please specify when ordering. Site licences are £16+VAT per disc, please ring for further details.

New CD-ROM! £32+VAT

Contains over 2000 ClipArt files, each in Draw, ArtWorks & EPS formats + other demos.

Floppy discs £8 + VAT each

Single Floppy disc subjects available (one disc per subject)

1 General	11 Tools
2 Transport	12 AnimalsGB
3 Costumes	13 Chem Signs
4 Entertainment	14 Fire/Emerg Sn
5 Bugs 2 Slugs	15 Hazard Signs
6 Road Signs	16 Safety Signs
7 Sports Equip	17 Xmas1
8 Sports Figures	18 Xmas2
9 Dinosaurs	19 Xmas3
10 Symbols	20 Xmas4

Now available on CD-ROM

TopicArt catalogue available. £1.50 Inc VAT/p+p (cheques only)



RiscPC Computers

All Acorn computers include 1yr on-site maintenance. 3yr On-site is available. **20/20 finance available, ring for details.** For PC Cards see PC Card section below.

14" Monitor Systems (AKF60)

RPC600 4MHD425 £1148
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RPC700 5MHD425+4xCD £1450
RPC700 10MHD850 £1692
RPC700 10MHD850+4xCD £1760

17" Monitor Systems (AKF90)

RPC600 4MHD425 £1472
RPC600 4MHD425+4xCD £1572
RPC700 5MHD425 £1684
RPC700 5MHD425+4xCD £1774
RPC700 10MHD850 £2016
RPC700 10MHD850+4xCD £2096

Add £20 for Iiyama MF-8617E
Add £85 for Iiyama MT-9017E

20/20 Finance

on Acorn Systems (0%APR)

20% deposit (min) and 20 interest free monthly payments. Available subject to status. Ring for details.

A7000 Systems with 14" Monitor

A7000 2MNET £799
A7000 2MHD425 £799
A7000 2MHD425+4xCD £899
A7000 4MHD425 £875
A7000 4MHD425+4xCD £975

RiscPC Multimedia CD-ROM Pack

Includes 25W stereo mains speakers, Hutchinsons Encyclopedia & RiscDisc (Vol.1) together with one of the following CD-ROM drives.

4x ATAPI CD Pack £165

The above can only be used with RiscOS 3.6 machines.

4.4x SCSI CD Pack £375

The SCSI Pack includes a Morley cached SCSI Card. Add £20 extra for SCSI 2 Card.

QuickLynk

New Product

Software only £28
With 5m Local Cable £34
With 10m Local Cable £39

QuickLynk allows you to automatically access another Acorn RiscOS computer remotely using the serial port via modems or locally using a cable to connect the two computers. Each computer can be configured to allow access to any attached filing system device eg ADFS, IDE, SCSI, CDFS, etc. Once connected, files can be transferred to/from the remote computer. Other features include password access, auto dialler with phone book and chat mode to send messages to remote computer/user. Transfer rates up to 1900 bytes/s can be achieved with older computers, eg. A410, A3000, peaking at 11400 bytes/s on the RiscPC range. The transfer rate is limited by the speed of the serial port. Requires RiscOS 3.10 or greater.

zip Drives

- Zip Drives work just like your hard drive, letting you instantly access files and applications, exept they are removable.
- Zip Drives use 100Mb Capacity Zip Discs.
- Any Number of discs can be used giving unlimited capacity.
- Both Zip Discs and Zip Drives are Portable.
- Zip drives are fast, data transfer speeds around 1Mb/s - ideal to backup your hard drive.
- Each drive comes with a 1 year warranty and a free starter disc.
- The Zip drive requires a SCSI card.

External Zip Drive (SCSI) £170
Single 100Mb Cartridge £15
Pack of Ten Cartridges £115

Mail Order - 0161-474 0778 (All prices exclude VAT) Carriage included except where indicated

RiscPC PC Cards

When purchased with a RiscPC System
PC5x86-100 £399
PC486DX4-100 £199
PC486DX2-66 £149
PC486SX33 £99
When purchased seperately
PC5x86-100 £499
PC486DX4-100 £299
PC486DX2-66 £249
PC486SX33 £199

Trade-In discounts of £100 for DX2/DX4 cards and £200 for PC5x86 cards are available when trading in a ACA42 486SLC33 PC cards.
Add £6+VAT carriage for PC cards.

RiscPC Upgrades

Microsoft Windows '95 (CD-ROM) £70
Microsoft Encarta '96 for Windows £40
Microsoft Cinemania '96 (Win95 only) £35
ESP16 bit Sound Card (Carr.£2+VAT) £60
YES 16 bit Mozart Card (carr. £2+VAT) £60
2nd Slice Case Upgrade (Carr. £6+VAT) £99

Memory Upgrades

RiscPC Memory, please ring to confirm prices

4Mb SIMM	£70	8Mb SIMM	£130
16Mb SIMM	£300	32Mb SIMM	£650
1Mb VRAM	£100	2Mb VRAM	£160
1-2Mb VRAM Upgrade (exchange)			£100
A3000 Memory			
1-2Mb RAM	£55	2-4Mb RAM	£90
1-4Mb RAM	£129		
A3010 Memory			
1-2Mb RAM	£40	2-4Mb RAM	£105
1-4Mb RAM	£145		
A3020/A4000 Memory			
2-4Mb RAM	£89		
A5000 Memory			
2-4Mb RAM	£89	4-8Mb RAM	£229
A300/400 Series		4-8Mb RAM	£229

Monitors

Acorn AKF50 14" 0.28dp MultiScan £275
Acorn AKF60 14" 0.28dp MultiScan £325
Acorn AKF90 17" 0.28dp MultiScan £599
Iiyama MF-8617E 17" 0.26dp M/Scan £549
Iiyama MT-9017E 17" 0.25stripe M/Scan £650
Older computers will require an adaptor £12

Printers (Include Cable)

Canon BJC-210 (360dpi Colour) £190
Canon BJ-230 (360dpi Mono) £265
Canon BJC-4100 (720x360dpi Colour) £250
Canon BJC-610 (720dpi Colour) **New!** £360
Epson Stylus Colour Printer (720dpi) £Call
HP LaserJet 5L 4ppm (600dpi) £410
HP LaserJet 5P 6ppm (600dpi) £630
Add £40 to above printers for TurboDriver

I³ Networking

A30X0 EtherLan 102 10Base2/T £125
A3020/A4k EtherLan 200 10Base2 £135
A3020/A4k EtherLan 201 10BaseT £135
A300-A5k EtherLan 502 10Base2/T £125
RiscPC/A7k EtherLan 602 10Base2/T £105
For Access+ add £15 to above prices.

RiscOS 3.1 Upgrades

Single Rom set (fitting instr./no discs) £34
3 Rom sets (fitting instr./no discs) £79
10 Rom sets (fitting instr./no discs) £255
Documentation (Guide & Discs) (0% VAT) £29
Carrier board for A300/A440 £22

Portable Computers

Acorn A4 Portable £1149
Pocket Book II (256k) £205
Pocket Book II (512k) £255
Pocket Book II (1Mb) £285
Psion 3a (256k) £199
Psion 3a (512k) £249
Psion 3a (1Mb) £270
Psion 3a (2Mb) £305

A-Link	£42	PC Serial Link	£60
Parallel Link	£26	Mains Adaptor	£15
128k RAM SSD	£43	512k RAM SSD	£105
256k Flash SSD	£47	512k Flash SSD	£77
PB/Ps3 Games	£Call	PBII/Ps3a Games	£45

Hardware Upgrades

24i16 Multimedia Card (512kb framest.) £339
24i16 Multimedia Card (1Mb framestore) £385
486sx25MHz Bare PC Card £275
486SLC50MHz Bare PC Card £339
Refer to RiscPC memory to add to PC cards.
FPA Upgrade for ARM3 £59
Colour Card Gold (CC) £135
Eagle M2 Multimedia Card (CC) £319
iTV TV Tuner & Teletext card (Irlam) £169
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Logitech Mouse (Acorn) £25
Midi Max Card (CC) £68
Movie Magic (CC) £249
Powerpad (dual) (Gamesware) £33
Scart - 9pin Monitor/RGBTV cable £12
Scart - 15pin Monitor/RGBTV cable £12
Serial Upgrade for A3000 (Acorn) £19
Stereo Speakers 25W (mains powered) £35
Stereo Speakers 80W (mains powered) £50
TV Tuner with TeleText (CC) £157

Modems

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Sportster Modem Bundles

Modem bundles include a Sportster modem, cable, phone splitter, ArcTerm7 & ArcFAX.
14k4Vi Sportster Fax/Modem Bundle £200
The above modem also has voice facility
28k8 Sportster Fax/Modem Bundle £265
V.34+ Courier Fax/Modem & cable only £345

Sportster Modems

14k4Vi Sportster Fax/Modem & cable only £115
The above modem also has voice facility
28k8 Sportster Fax/Modem & cable only £190
V.34+ Courier Fax/Modem & cable only £270

Scanners/Digitisers

ScanLight Video 256 £199
Epson GT-5000 Colour Parallel Scanner £Call
Epson GT-5000 Colour SCSI Scanner £389
Epson GT-8500 Colour SCSI Scanner £525
Above colour scanners include !TWAIN drivers, ImageMaster & Cable.
Vision24 Colour Digitiser Int £69/Ext £94
Hi-Vision24 Digitiser A5000 Int £94/Ext £119

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A3010 HCCS Hard Disc Multi-Podule
80Mb + User Port + 2 Slots £186
130Mb + User Port + 2 Slots £269
160Mb + User Port + 2 Slots £319
A3000 Internal IDE Hardcards
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160Mb + User Port £279
See top of page for other hard discs.

Printer Consumables

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BC-02 Cartridge (BJ-200) £17
BJI-642 Cartridge (BJ-300) £15
BJI-201bk Black Cartridge (BJC-600 ser.) £10
BJI-201C/M/Y Cartridge (BJC-600 ser.) £8 ea.
BCI-21Bk Black Cartridge (BJC-4000) £9
BCI-21C Colour Cartridge (BJC-4000) £17
BC-20 Fast Black Cartridge (BJC-4000) £25
BJI-643 Black Cartridge (BJ-800) £16
BJI-643C/M/Y Cartridge (BJ-800) £20 ea.
DeskJet500 Mono/Colour Cartridge £20/£23
EP-L Toner (LBP-4/HP LJIII) £59
Epson Stylus Colour Black £16/Colour £30
HP 92274A Toner (HP LJ4L) £59
JP-150 Ink Cartridge (Acorn) £22
Swift24 Mono/Colour Ribbon £7/£15

Books (No VAT)

Acorn RISCOS3 PRM's **Add £7 carr.** £99.95
Acorn Volume 5a PRM **Add £7 carr.** £29.95
Acorn BBC Basic VI Guide £19.95
RiscPC Tech Ref Guide **Add £7 carr.** £29.95
ArtWorks Made Easy (Dabs) £10.00
DTP on the Archimedes (Sigma) £12.95
First steps in prog RiscOS (Sigma) £14.95
Game Maker's Manual (Sigma) £14.95
RiscOS 3 First Steps (Dabs) £10.00
Add £2 Carr to above (£4 for Acorn books)

Terms

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Brinksway/Chestergate
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King St W
Wood St
ONE WAY
A560

CD-ROM's

CD software for RiscOS
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ClipArt CD 1/2 (CC) £19 each
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Musical Instruments (MS) £39
PB Bears Bthday Pty £32
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Call for titles not listed

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Pocket Lab

THE Acorn Pocket Lab is a new scientific data-logging solution for Pocket Book users. It has been designed around the LIVE data-logging unit and can be purchased as a complete kit or as an upgrade for existing Pocket Book users

The Pocket Lab is supplied with the LIVE data-logger, temperature and light sensors, a 128K flash disc containing the software and a number of spreadsheet templates, a teacher's guide and activities disc. A single unit containing a Pocket Book and all the required hardware costs under £500.

The Pocket Lab software enables data from three sensors to be recorded simultaneously and then analysed in real-time on the Pocket Book: pupils will be able to see the temperature changing as the sensor is moved. It also allows you to pan and zoom around the data in order to examine it in more detail. Readings may be taken by clicking on the graph at any point.

Users can also buy a wide range of more specialised sensors including one that will measure pH, magnetic field strength, voltage, current, sound, humidity and air pressure. A CheckIT display can also be purchased to allow the system to be used as a meter.

With the endless number of sensors that are available the Pocket Lab solution could be used in many different curriculum areas and would be a worthy purchase for any school.

Acorn Education
Tel: (01223) 254254



The MediaPad

THE MediaPad from Acorn is, alas, not a new portable from Acorn but a new name for Acorn's excellent Pocket Book II. The MediaPad is designed to fit into Acorn's new Media-Range of products announced at BETT '96 and is described as a solution to 'link, fetch and carry' data between the rest of the range.

At the simplest level this could involve taking school work home, working on it and then uploading it onto a computer at school the following day. Looking into the future, the MediaPad could become an ideal companion to the Media-Surfer. E-mails could be composed on it, uploaded on to a MediaSurfer and then sent to whoever via the Internet.

Another development is the Pocket Book version of *'The Three Little Pigs'*, converted from the popular CD. Although all the pictures were in black and white and the sound a little squeaky, they were both perfectly adequate. Proof perhaps that the Pocket Book has more educational uses than many first thought.

With all these recent developments it becomes fairly obvious that Acorn hold the Pocket Book in high regard and have plenty of exciting plans for its little baby.

Acorn Education
Tel: (01223) 254254

Purple Update

PURPLE Software, one of the biggest third party developers for the Psion, have announced a couple of new applications. *3a Chess* is a new version of the classic game – *Chess,* it takes full advantage of the enhanced graphics capabilities of the 3a and features both 2D and 3D graphics, various difficulty levels, a chess clock and a set of master chess games. The program costs either £34.95 on floppy disc or £39.95 for an SSD version.

The other is *DataView Pro*, a new version of the excellent *DataView* package. This features both a table and card view, user definable lists, single and multi-level searches, advanced printing options and the ability to enhance sorting by defining fields as text, numeric, currency, date and time. The program costs £59.95 for the floppy disc version and £69.95 for the SSD one. Updates from *DataView* are available. I hope to take a more detailed look at this package next time.

Purple Software
Tel: 0171-388 3111

Attention Pocket Book users...

In the near future I am interested in doing some case-studies on how Pocket Books are used, both in schools and in unusual circumstances.

If the way you use your Pocket Book fits into either of these categories then please contact me at the usual *Acorn User* address.

Pocket-able Books

If you're looking for something to put your Pocket Book in when you are carrying it around, Widget software might have the answer.

They have just released four new cases designed specifically for your Pocket Book. These range from a holster-style case to a 'zip and flip' briefcase style one. Most of the cases will also hold a couple of SSD's and will make an ideal companion for your Pocket Book. Prices range from £13.95 to £49.95(!).

Widget Software
Tel: (01438) 815444

Password Protection

One of the few features that the Psion 3a has always had but the Pocket Book II hasn't, is the ability to password protect your portable.

If anyone has written a program that will do this for a Pocket Book then please let me know at the usual *Acorn User* address.

Limited Edition Psion 3a

Psion has just announced a limited edition 3a. It comes with 2Mb of memory and has a smooth wood-effect finish. The model is available now, costs £449.95 and is available from all Psion outlets including Harrods.

Contacting me

You can contact the Portables page by writing to me, Mark Taylor at Acorn User, Media House, Adlington Park, Macclesfield SK10 4NP, or by e-mail to aueditor@idg.co.uk.



Other news

The licensing agreement between Oracle and Acorn is another area where Acorn is helping to smash the Wintel dominance and the likely spin off in terms of the net surfer computer appears to be gaining momentum. The heart of the machine is a RISC-based 50 MHz ARM 7500 processor. Likely sales predictions in the region of 1 million units to ship following the debut in September.

Prices are quoted at around $500 and I would expect that to translate directly into pounds sterling. Expect a boom in Internet provider support for the new machine. Shares in any provider already floated look a good bet as do Acorn's own shares. Then again I still put my £1 each week on the Lottery.

Business credibility

One of the biggest barriers to using Acorn's in Business, and persuading people that they're the viable alternative that they genuinely are, has been credibility. As long as Acorn's fame (or notoriety) was confined to the classroom no self-respecting (ill-informed) businessman would give them a second glance for the *serious* needs of business.

But that's changing, the deals with Apple, DEC (via ARM Ltd) and Oracle, the fact that you can't open the business pages of a newspaper without seeing Acorn's name linked with yet another major world player means that Acorn is gaining credibility. At last it's becoming possible to push Acorn seriously without having to worry about the *"they're only education"* reply.

Contacting me

You can contact the Business Page by writing to Mike Tomkinson at *Acorn User*, Media House, Adlington Park, Macclesfield SK10 4NP or by e-mail to aubizniz@idg.co.uk.

Acorn mean business

Mike Tomkinson takes over the Business Page chair

SINCE the departure of Alex Singleton for new pastures and the demise of the Business Page from *Acorn User* I have felt there was something sadly missing. Happily for me the editor agreed and here it is, the Business Page is back.

If you have any news items you wish to see featured here please let me know. The sort of thing that I'm after is anyone using Acorn machines in a business context — no matter what the size — or perhaps how using Acorn machines in a business has brought particular success, not necessarily how using a payroll program has successfully paid your staff each month (though I'm sure that pleases the staff) but maybe a bit more exciting. I also require software news.

So why the return of a business page? After all it's one of the areas that Acorn has been a little less successful in penetrating. Well, that's precisely the point, I want to show how using RISC OS machines in business can lead to success.

There are at least two developments which seem to indicate the need for a Business Page — the forthcoming PC developments from Acorn and the joint venture with Apple. By PC developments I include faster and better PC cards to run on existing Risc PCs as well as the new Acorn PC line-up mentioned in last month's news pages.

Although the Acorn and Apple get together is not a merger in the strict business way and is described as a joint venture it marks the way forward. Neither company alone can compete against the dominance of the PC world — even in the Education market. I know the pressure IT co-ordinators are under to conform to the so-called *industry-standard* PC. The PC cannot be ignored but it is possible to offer an alternative and better computer and this is what Acorn has been doing.

Business is often a matter of habit — even the most innovative and forward-looking company can be very conservative in the data processing department but the monopoly can be broken. Apple did it with a product that dared to be different and that acquired cult status and then conformity among the DTP business. Acorn has had such opportunities but never the marketing budget to go for a niche market other than education.

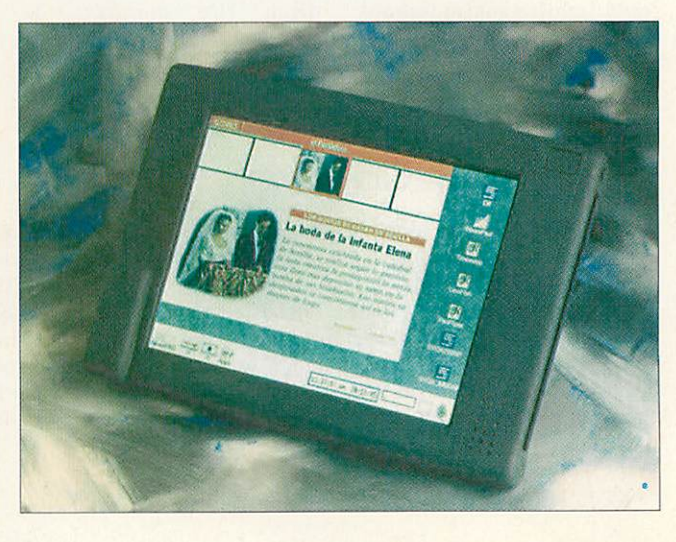
It is time for change — we all support a good product and a British one at that. I am not advocating a jingoistic *Buy British* campaign but there are worse alternatives and they're in common use. If you have any influence at least persuade your IT purchaser to consider Acorn.

Full details of the joint venture can be found on Acorn's web site — point your browser at http://www.acorn.co.uk.

The new portable

After months of speculation and some disinformation Acorn has finally announced the new portable (*see News pages*). This is great news for business users as the area of portable computing was sadly neglected by Acorn. The A4 was always under powered and over priced. The new portable code named Stork looks like a completely different bird. Again look at the Acorn web site for early details, though try http://www.art.acorn. co.uk

A RISC powered portable is the business travellers dream ticket. No more power hungry Pentium or 486 processors draining your battery on power up but a low power consumption RISC 7500 chip at its heart. The first commuter on the 06:30 from Surbiton to London to own one will be the envy of all those around them whose laptop PCs are beeping and giving dire warnings about the advisability of saving before the battery finally expires. Still we will have to wait and see if this revitalises the area of portable computing and what effect it has on this page. Let me know.



Zapping the swarm

Matthew Bloch presents a new version of an old favourite

WAY back in 1987, Broderbund Software released a game called Crystal Quest which was rather fun to play. The idea was to move your ship round the screen with the mouse, pick up crystals, zap baddies and generally have a groovy time. And, of course, there were one or two silly sound effects.

Nearly 10 years later, there's a new version called Swarm. Written in about eight months for RISC OS, it's a little flashier than the black and white Mac version I played. You'll find parallax backdrops, particles flying everywhere, smoother animation, bonuses and a few other hidden features. I'd say that Swarm is a little bit tougher than Crystal Quest, but you'll find more bonuses available in Swarm.

Setting up

The bare minimum setup for running Swarm is a 2Mb RISC OS 3.11 machine with either a hard drive or HD floppy. A more preferable setup is 4Mb and a hard drive with a couple of meg free.

Due to space restrictions, I've had to distribute this version with the original sprite files in a highly compressed format together with an installation utility. This means you can't play the game straight out of the archive – it will need to be installed to a hard drive or high-density floppy disc.

Once you have loaded !SwarmInst, drop the star icon into the destination folder and press the Install button. The game will be copied across, and then the graphics files will be converted. If you are installing to a HD floppy, or want to save on hard drive space, you can opt to have the sprites compressed. Note that this takes a *very long time indeed* – we're talking twenty minutes – so you might want to have a race with Windows 95 or something.

While the conversion is going on, don't touch anything on the desktop! The method I've used is fairly grotty, but seems to work OK. You'll get a message telling you when the installation is finished.

Sometimes if the installation fails for no good reason, try again and it might work. If you've any problems with this, please get in touch with me – contact address on the disc help file. You can install over a previous version if it was only partially done – it will carry on where it left off.

Owners of 2Mb machines will probably need to clear the memory out before installing or running Swarm (1400k is needed), sorry about this, but it needs lots of memory to work. The game will not load some of the more exotic sounds if there is only a little memory available, and will warn you when the game loads. If Swarm cannot load any of the graphics files, it will dump you back in the desktop. Owners of 1Mb machines probably know what to do by now.

Double-click on !Swarm to play the game, !SwarmInst is not needed again unless you want to alter the graphics (see below).

Playing against the Swarm

Use the mouse to move the little jet-packer around, and click the left-hand button to shoot. Hold it down and let go for a spray of shots, the longer you hold the button, the larger the spray. Click the right-hand button for a bomb, which will destroy damned near everything on the screen. You start with four bombs, but there are more to pick up. As you shoot aliens, little yellow cylinders will fly out. Pick them up and you can get:

- extra life
- extra bomb
- destroy all the aliens on the screen
- remove all the mines

Big crystals occasionally pop out – don't shoot them – they're worth a lot of points if you can catch them. Lots of little surprises happen on later levels just to keep you on your toes.

To succeed, you'll need to keep moving and firing all the time. If you're surrounded by aliens, use a bomb and you should pick up loads of tokens very easily. Getting stuck in one of the corners is a bad idea: the more intelligent aliens will nail you.

Tab freezes the game, Escape aborts the current game, and Control-Escape will return you to the desktop.

Hackery and other black magic

There are several options in the !Run file of the game, where you can turn off the backdrop, change the speed and select a special fast frame rate option – turned on by default. This ensures a faster frame rate at the expense of a slightly flickery screen.

Edit the last line !Run file to suit. ARM2 owners should have the nobackdrop and noflicker options set, but the game still won't work too well. It should manage okay on anything else, but you will get a substantial speed increase from turning off the backdrop.

Potential problems

I hope I've now ironed out any serious (crashing) problems, but if you find any, please let me know and I can probably fix it very quickly. In particular, if the game freezes up just after you shoot, please scream very loudly. It took me the best part of six hours to devise a work-around for this one! Also, the collision detection is a bit dodgy around the generators, but it does err in the player's favour.

Owners of Risc PCs should note that the mode module included with the game will drive the monitor at 100Hz, which is above Acorn's recommended maximum of 90Hz (for the AKF60 anyway). If you are not happy with this, you should change the appropriate line in the !Run file to load the 90Hz mode module. This one has a distorted display, which isn't nearly as much fun.

If you have trouble running the program on an A7000 with uncompressed sprites try reinstalling it with the compressed sprites option switched on. It should then work.

If, when loading, an error pops up which starts with:

```
*** assertion failed
```

it's either due to a missing file in the game – caused, for example, by incorrect installation – or by the game not having enough memory to load up all of its resources. Note that some sounds might not be loaded (and parts of the game might be silent) if you don't have enough memory, but the graphics files must all be present for the game to work properly.

Updates

This version was released by *Acorn User* as part of the PD promotion scheme and is copyright IDG Media for three months after the publication date. After this, I'll release a major new version – minor bug fixes will come free and will be released through Arcade BBS. Those without a modem can write to me and I'll send the relevant patch through the post.

Further information is available in the help file.



TextPort

Ian Giblin

THIS is a drag-and-drop text file processor designed to simplify the business of moving text files between platforms, or between your own RISC OS system and the internal PC implementation or other systems.

There is also a command-line version inside the application (open with shift-double-click) which you can put in your library. Running the command-line TextPort with no parameters gives a usage summary.

The file TPORT/EXE is a DOS version of the command line program, using the same C source code as the RISC OS version except for the system-specific file operations. I haven't used this much but it has proved reliable during reasonable tests. The only functional difference is that it will not let you copy/move a file onto itself – the RISC OS version uses a temporary file. If you copy this to a DOS disc or partition you can rename it to TEXTPORT.EXE.

Explanation

Different operating systems use different characters to indicate the end-of-line (EOL) in text files. These characters are usually one or both of &0D and &0A – these are in hexadecimal.

These characters are more commonly known by their ASCII names, which are CR (for Carriage Return) and LF (for Line Feed) respectively. The standard usage is as follows:

System	End-of-line sequence
RISC OS	LF
Unix	LF
MS-DOS	CR LF
Apple Macs	CR

I have found that Mac users can't read my text files, and quite often I can't read theirs easily. This program helps here, as well as the more obvious uses of moving files around on your own machine.

Usage in the RISC OS desktop

Dropping any file on to the TextPort icon will open a dialogue box where you can set the type of line feeds you want to give the new file. The program assumes that you want to turn foreign files into Acorn format, and Acorn files into PC format.

There is one other option: Strip trailing spaces which will remove any spaces from the end of the lines. Since this is a text file processor, the file type of the output file will always be set to Text so you can double-click on it to load it.

Warning

If, like me, you usually can't be bothered to shut down your PC emulator or co-processor card, you should be aware that you may confuse the PC system by writing to a drive which it thinks it has seen.

Try to use a floppy to transfer files to DOS, even inside your Risc PC and remember to dismount the disc after writing to it. This can be done without freezing the PC component and is usually the safest method.

If, like me, you can't even be bothered to do that, then at least set up a very small (say 4Mb) D: drive for your PC and never write to the C: drive while !PC is running, even if the window is closed.

Regular items

- Run the Risc includes the first part of Mike Cook spinning LED disc.
- INFO contains a plethora of demos, utilities and applications to keep you busy.
- Wimp C is now developing a program which displays a window and puts data into it.

There's also an update of last month's DiscTree program which fixes a small bug.

Disc information

THE software on this disc has been compressed using *ArcFS 2* from VTi. Unlike on many previous discs, these are straightforward archives which are opened by running a copy of *ArcFS* and double-clicking on the archive to open it. There is a copy of *ArcFS* on the disc.

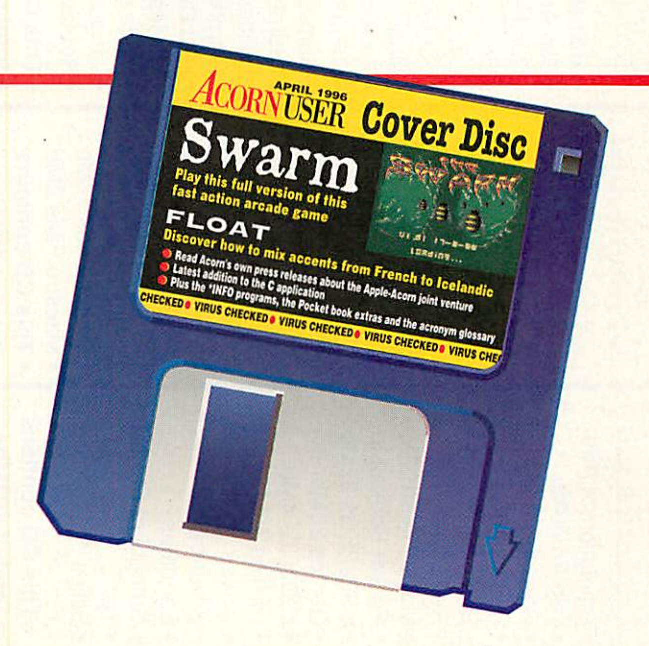
Most software will run straight from the archive, but some programs may need to be copied out of the archive before being run, uncompressing them in the process. Any program that saves a file to disc, for instance, will be unable to do so into the archives on the disc.

Faulty disc?

If your disc is faulty, test whether it will verify by clicking with Menu on the floppy drive icon and choosing Verify.

If it fails to verify or is physically damaged you should return it to *TIB, TIB House, 11 Edward Street, Bradford, Yorkshire BD4 7BH.* If it verifies successfully return it to the *Acorn User* editorial office at the usual address

The *Acorn User* cover disc has been checked for viruses using *Killer* version 2.204 from Pineapple Software.



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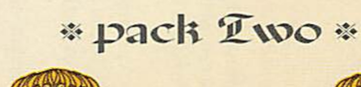
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The wizards of Oz

If you want a crystal ball reading on the future of Acorn UK, you need look no further than Acorn Australia, as Mark Moxon found out when he visited Acorn down under

Image is everything, and if we Poms are to be honest, we'd have to admit that our opinion of Australia is based more on what we see in Neighbours and Home and Away than actual hands-on experience. Most British people think that life on the other side of the world is all about beaches, barbecues, beer and boomerangs, but not many realise that Australia is considerably ahead of the UK when it comes to technology.

For example, the Internet is really big in Australia, as it's an easy and cheap way to communicate over such a vast continent. Electronic banking is highly advanced: you can withdraw cash from any shop that accepts your bank card, so there's no more having to leave the pub when you run out of money, only to find that the hole in the wall is empty.

A computerised national lottery has been around for years, and there are so many electronic gambling machines that gambling addiction is now a serious social problem. Speed cameras have been catching fast drivers out here for much longer than in the UK, and mobile phones are everywhere. As a result, the general awareness of technology is much higher in Australia than in a lot of other Western countries.

This is exactly the sort of society that suits Acorn's sales philosophy. People want the latest technology, and, as any Acorn fan knows, that's just what Acorn provides. There's no language barrier between Australia and the UK, the trade agreement is well-defined, and the education systems are not dissimilar, so Australia is the logical place for Acorn to be selling its products.

Acorn in Australia

Acorn Australia has been in business since Acorn UK bought the Australian company Barson Computers in June 1990. Before then, the BBC micro had proved very popular in schools in Western Australia, the state that covers the whole western half of the continent, and Tasmania, the island state off the south-east coast of the mainland. The state governments decreed in the early 1980s that schools could only buy BBC micros. Back then Acorn had a serious portion of the market, and most schools used either the Beeb or the Apple IIe, which happened to use the same processor. Then came Acorn's change to RISC technology in 1987, and instead of pushing the message that RISC machines were better for schools, the Australian dealers stuck to selling Beebs to schools that wanted them, which enabled Apple to take over and become the market leader in Australian schools.

Acorn Australia

'Acorn moved into Australia because we realised the changeover to RISC technology wasn't being handled in the right way,' says Laurence Hardwick, National Product Manager of Acorn Australia.

'By the launch of the A3000 – which happened in Australia 12 hours before it did in the UK – we'd changed the direction of the sales and marketing of Acorn machines.'

Laurence has been with Acorn for a very long time now: he was part of the original staff back in the heady days of Atoms and Beebs, he's sixth on the Acorn payroll, and he was the engineer responsible for designing the Econet network system. He's even demonstrated Acorns to the Queen when she made the generous gift of two Econet systems to India back in the '80s. Times have changed quite a bit since then.

Direct selling

Acorn UK went through a serious strategy change when it announced the creation of a direct sales system where schools would buy directly from Acorn and its chosen agents. Just as Australia is ahead in the

technology game, Acorn Australia has been ahead by selling direct for years.

The company has two main offices. Head office is in Collingwood, Melbourne, on the eastern side of the south coast, and there's a regional office in Parramatta, Sydney, about a quarter of the way up the east coast. The offices aren't nearly as large as the Acorn Group's head office in Cambridge – the total head count in Australia is around 16 – but in terms of what has been achieved, a little goes a long way.

'We've been selling Acorn products direct since 1990 in New South Wales, and 1991 in Victoria,' explains Shane Wharton, National Sales Manager for the company. 'We've also had Acorn in Education Centres (AECs) for longer than in the UK, although Australian AECs are more like the UK's Acorn Agents in that they act as dealers not just advisory services.

'We've got a catalogue of 1,678 products that we sell direct, with most of them being imported from companies in the UK. Pricing can be a bit of a nightmare: we can't stick to a guaranteed retail price, because it fluctuates depending on the exchange rates. It makes keeping the catalogue up to date quite a challenge, but we manage fine.'

Compared to the number of Acorn third party products in the UK there aren't many native Australian Acorn products, but there are still some important local packages. Acorn Australia's market is wholly educational, so there are, for example, clip art packages based on Australian life and geography, and a number of Antipodean multimedia presentations.

One interesting product is the state font: each state has its own particular font it recommends for use in teaching children to read and write, and these have been recreated for the Acorn range. There are also a number of authors who have been successful in selling their products to UK companies: 4Mation is a good example of a UK company with a lot of Australian contacts.



Laurence Hardwick – National Product Manager

However Acorn Australia's catalogue makes familiar reading, with companies like Computer Concepts, Sherston, 4Mation, Longman Logotron and so on filling the range. There are more similarities between the UK and Australian education systems than between Australia and America; Australian spelling is the same as English (though there are some interesting Americanisms: the Labor Party, for example) and UK packages fit into the curriculum here as well as they do back home.

The sales team

Not surprisingly for a sales and marketing company, the sales team is a key part of the setup, but it's not just a case of blindly ringing up schools and giving them the hard sell. The members of the sales team have to know about every product they sell, which means getting familiar with hundreds and hundreds of programs, support packs, and so on. That sales are on the increase is a credit to the jack-of-all-trades set up in sales.

'We're much closer to the product range than Acorn UK,' says Laurence. 'Our sales team understands how the products fit into the curriculum, and because you can't buy products from mail order companies in the same way that you can in the UK, we have to push our sales message hard.'

The sales push is working. A survey in July 1993 made by Griffin University in Queensland showed that Acorns were used in 22 per cent of Australian schools and 42 per cent of New Zealand schools, with big successes in Tasmania (where 90 per cent of schools used Acorns) and Western Australia (60 per cent). Add in the fact that Acorn Australia's sales were up 40 per cent in 1994, and things look good, but it's not all plain sailing.

'Although we have good market penetration in Australia,' says Laurence, 'the population is very small. It's a continual battle to survive on selling machines to just 10,000 schools. To put it into perspective, say you wanted to sell CD-ROMs to schools in the UK, but only 20 per cent of schools had CD-ROM drives, your potential market would still be larger than our entire market in Australia.'

Not surprisingly, the sales team is busy, and spends most of its time on the road. Schools need that personal touch, but whereas it's easy enough to travel around the British Isles, in a country the size of Australia – which is as big as the United States – you have to treat it totally differently. When it takes about a week to drive



The Melbourne office

from Sydney to Perth, you can't support the whole country from just two offices, so the AECs act like dealers to their local areas.

'Without sales, we'd have nothing to support,' says Shane, 'so that's a really vital part of the process. The combination of dealers and direct sales works well, and is the only real way of selling to such a vast country.'

Head office

There are two sales forces, one in each office, but the company's main activities centre on the Melbourne office, where there is also the central technical support desk, the distribution centre for the whole country, the service department, and the accounting office, not to mention most of the management team.

The Melbourne office building is large, and anyone who saw Acorn UK's offices at Histon will recognise the modernist glass frontage and green logo. One of the reasons that the Melbourne office is so big is to house a complete warehouse for holding and distributing stock through the direct sales channel. It means Acorn Australia is already a one-stop shop for education, an aim that Acorn UK has stated it has for back home.

Technical support is a vital part of the equation, an area that is proving challenging in Acorn UK as it shifts staff around to cope with the direct sales system.

'We get asked about using products in the classroom, not about circuit diagrams for boards or hardcore programming techniques,' says Laurence. 'The emphasis is on practical application of computers, not the technical side. Our customers are teachers, not home enthusiasts, which means our support focuses on solving their problems and getting the system working, rather than just providing straight technical information.'

Therein lies a big difference between the UK and Australian markets, but it's one that Acorn UK will have to learn to cope with. Acorn's customers are teachers, and if Acorn sells direct, it has to support teachers' queries. Previously most technical queries to Acorn UK were from home users or dealers: teachers tended to go to their local dealers. In Australia they tend to go straight to the company that makes the machines.

The difference down under

The customers aren't the only difference between the UK market and Australia. Acorn has always been based heavily round the school year, so in the UK the Acorn market becomes markedly quiet in the summer months – the cause of a few third party liquidations over the years – and picks up towards the start of the school year in late August and September.

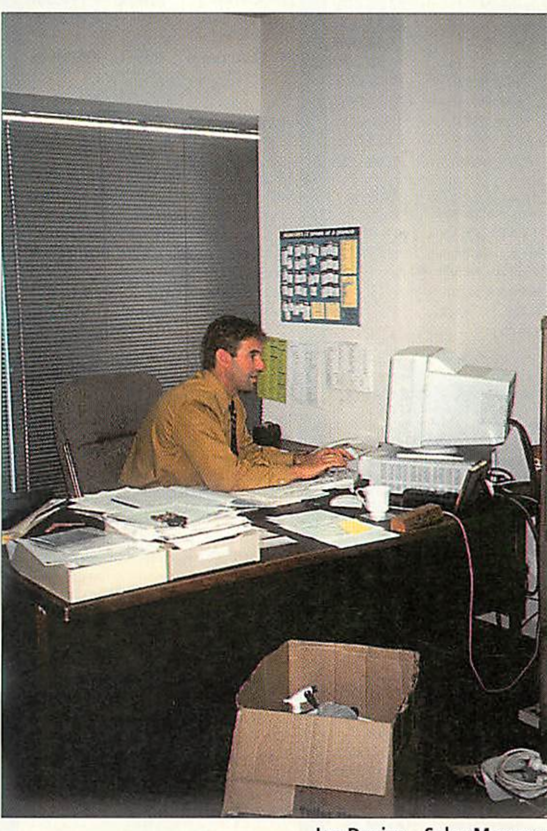
The same applies to Australia, but the school year goes from January to December, and it's split into either three terms or four semesters, depending on which state you're in.

This means that at the start of the year, when the UK market is gearing up for the new year with BETT and the start of the Easter term, the Australian schools are on their summer holidays.

Conversely, when the UK schools are on their summer holidays, Australian kids are beavering away through the winter semester.

Acorn World, at the end of October and the venue for the launch of a large number of new products, appears half way through the last semester of the school year, too late for schools to use products until the next school year.

The time difference between the UK and Australia is also crucial. Melbourne, for example, can be up to 11 hours ahead of the UK (depending on daylight saving time), which makes communication difficult at the best of times, but even harder when work hours are nine to five. Fax and e-mail are a godsend, but you'll often see Laurence having to ring UK companies from home to get answers to more esoteric technical questions.



Ian Davies – Sales Manager

Of course, this doesn't just apply to contacting third parties, but also to contacting Acorn UK, so it's no wonder Acorn Australia feels more like an independent company than just an international branch of the mother company.

Online Media is also active in Australia – on-line information is a real solution to the problem of communication over a huge distance – but it's all dealt with by the same company.

Laurence sums it up well: 'In the end, despite being a company which is a tenth of the size of Acorn UK, with a tenth of the number of dealers, trying to sell ten times as many products to a country that is ten times the size, we do well. It's a daunting task, but one we approach with enthusiasm.'

And that's fair dinkum, as they say round these parts. 

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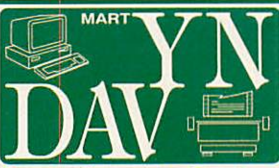
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In foreign parts

Clive Semmens shows how you can get your accents right

European languages, and many others, use the same basic Roman alphabet as English, but most of them use various little marks in addition and, in some cases, even special characters. The general term *diacritical marks* or just *diacritics,* is used to cover all the varieties of marks. For really professional DTP, if you are printing international names and addresses, or text in foreign languages, you need to be able to produce these properly.

Most of the diacritics are accents and the term is often broadened to refer to them all. Printers may even apply it to whole combinations of letter and diacritic – in the days of metal type, they were usually made as single pieces. French, for example, uses à, â, ç, è, é, ê, ë, î, ô, û.

All these, and those for many other languages, can easily be typed on RISC OS computers, with no extra software at all. Later in this article I'll show you how, but this is fairly readily available information and I'm only repeating it for completeness. What we're looking at here is producing the diacritical marks used in other, generally less well known languages, such as Polish, Hungarian, Czech or Turkish, and not so straightforwardly supported by Acorn – or indeed Macs or PCs or anyone else. Acorn actually has the edge in this area, as it is much easier to hack the system to make it support them.

The languages supported without any hacking include Danish, Dutch, English, Faroese, Finnish, French, German, Icelandic, Irish, Italian, Norwegian, Portugese, Spanish and Swedish. These languages are covered by the Latin1 character set (see figure 1) which is the default. It's an International Standard, which not everybody sticks to, but Acorn do.

In theory, if you need Turkish, you should use the Latin3 character set. The characters are there in Acorn fonts, but there's no simple way to access them in most software and not all third party fonts have them at all.

Even if the system were fully set up, you'd be stuck with the same character set at least for a whole document. You could use English together with any other language, but you couldn't have Danish and Turkish in the same document, or Hungarian (Latin2) with Danish or Turkish. Lists of international names and addresses would be out. This is the situation with quite a lot of software on several platforms: after all, it is an International Standard. But with a little judicious and perfectly legal hacking, we Acorn users can do better.

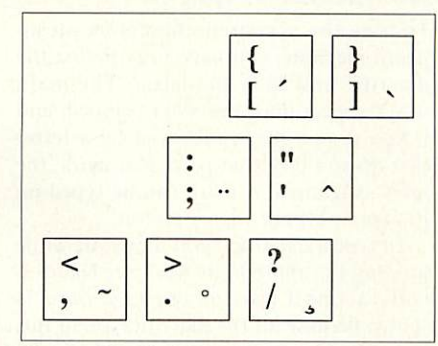


Figure 2: Use Alt to get the diacritics

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P	`	p		‘		°	À	Ð	à	ð
1	!	1	A	Q	a	q	*f*	’	¡	±	Á	Ñ	á	ñ
2	"	2	B	R	b	r	ŵ	‹	¢	²	Â	Ò	â	ò
3	#	3	C	S	c	s		›	£	³	Ã	Ó	ã	ó
4	$	4	D	T	d	t		“	¤	´	Ä	Ô	ä	ô
5	%	5	E	U	e	u	Ŷ	”	¥	µ	Å	Õ	å	õ
6	&	6	F	V	f	v	ŷ	„	¦	¶	Æ	Ö	æ	ö
7	'	7	G	W	g	w		–	§	·	Ç	×	ç	÷
8	(	8	H	X	h	x		—	¨	¸	È	Ø	è	ø
9	)	9	I	Y	i	y		–	©	¹	É	Ù	é	ù
A	*	:	J	Z	j	z		Œ	ª	º	Ê	Ú	ê	ú
B	+	;	K	[	k	{		œ	«	»	Ë	Û	ë	û
C	,	<	L	\	l	|	…	†	¬	¼	Ì	Ü	ì	ü
D	-	=	M	]	m	}	™	‡	-	½	Í	Ý	í	ý
E	.	>	N	^	n	~	‰	ﬁ	®	¾	Î	Þ	î	þ
F	/	?	O	_	o		•	ﬂ	¯	¿	Ï	ß	ï	ÿ

Figure 1: The Latin1 character set

Character DF is the German Eszett (s-z, or double s).

Characters DE and FE are the Icelandic (or Faroese) Thorn – this is the letter used in Old English for the *th* sound in *the,* and sometimes misinterpreted as a Y – as in Ye Olde Tea Shoppe. The usual script used in England did make it look a bit more like a Y: .

Characters D0 and F0 are the Icelandic Eth – our unvoiced *th* as in *thick.*

Character FF is used in no language on earth as far as I know. Dutch has an i-j ligature which looks a bit like a y-umlaut in some fonts, but not in this one (Trinity). BS ISO-IEC 6937 says French and Welsh use it but my French and Welsh friends deny it vehemently.

Characters 5E and 7E are *asciicircum* (hat) and *asciitilde* (swung dash) respectively – not the same as *circumflex* and *tilde.*

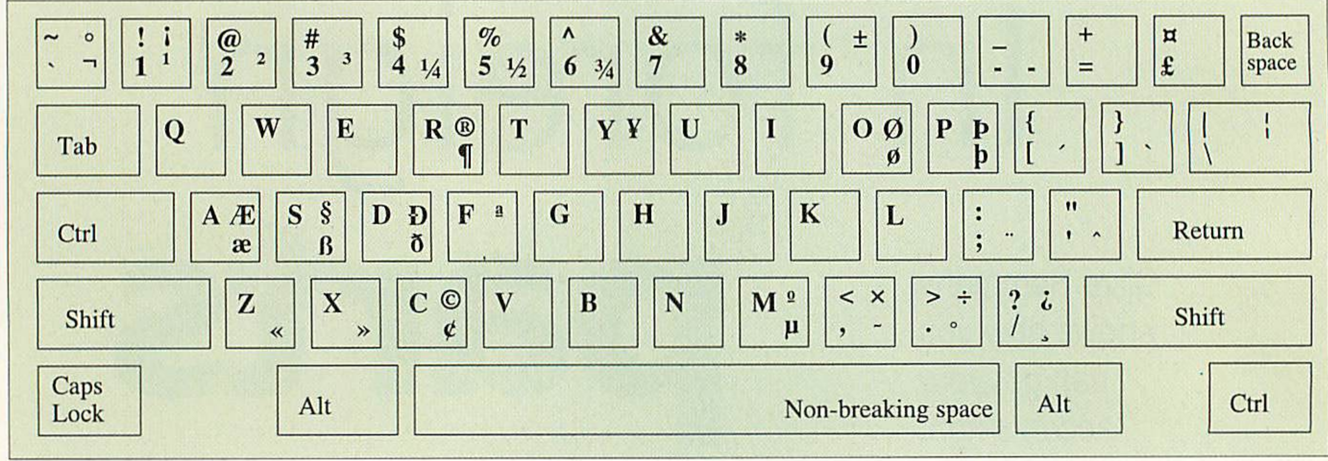


Figure 3: The standard RISC OS keyboard layout

Special characters on a RISC OS 3 keyboard – pre-Risc PC. Hold Alt, or Alt-Shift as appropriate, to get the characters on the right of each key. Risc PC owners have the corresponding diagram in their User Guide or Welcome Guide – the differences are few.

No hacking required

To type the accented characters on an Acorn machine, you have to type first the diacritic and then the letter. The mark won't appear until the letter is typed, and if you type a mark followed by a letter that doesn't take that particular mark, the mark is ignored. A mark can be typed on its own by typing a space after it.

To type a diacritic, hold down Alt while pressing the appropriate key – see Figure 2. Only a small part of the keyboard is shown because all the diacritics are in this area. The remainder of the special characters are also accessed using the Alt key, but of course they appear as soon as you type them. Figure 3 shows where they are.

Floating accents

To cope with several languages from different groups all at once, you can use floating accents. This means that each diacritic is treated as a character in its own right, and the font does not need to contain the combined letter-plus-accent characters at all.

Manual typewriters use this system, they can't even handle the 223 characters available in Latin1. On an accenting typewriter, when an accent is typed, the carriage doesn't advance, and the letter is then typed in the same location. The accent is positioned such that it appears correctly above the letter.

This is all very well for lower case letters and monospacing typewriters. In general, accents are omitted on upper case letters in typewritten work though some typewriters have an additional set of upper case accents, positioned higher.

Proportional spacing typewriters have a problem in the horizontal direction as well, and adopt a compromise positioning of the accents, but it isn't always very satisfactory.

RISC OS allows adjustment of the position of accents relative to their letters. It is possible to type some additional combinations by typing a bare accent (accent followed by a space), then the letter, and then adjusting their relative positions. However, there are still many combinations not possible using the Latin1 character set, and the adjustment process is a bit tedious if you have a lot of accents to do. Not all software implements this.

Using !Float

This is where the little hack comes in: Double-click on the !Float application and instead of the Latin1 character set you have a new set with all the diacritics as single characters – Figure 4 – you've lost all the combinations, of course. The keyboard changes too, giving access to the new characters as shown in Figure 5.

Lastly, !Float installs itself on the icon bar. This is specifically for the Impression

Diacritics' names

Although the diacritics are typed before the letter they apply to, the name is spoken the other way round: ü is called u-diaeresis for example. The names are as follows – the letter is only there to make the diacritic clearer:

- à – grave (pronounced 'grarv')
- á – acute
- â – circumflex
- ã – tilde
- ā – macron
- ă – breve
- ċ – dot
- ä – diaeresis (umlaut in German)
- å – ring
- ç – cedilla
- ő – double acute (Hungarumlaut in PostScript)
- ą – ogonek
- č – caron
- ť – háček

Special characters

Æ	æ	– ae ligature (all Scandinavian languages)
Đ		– eth (Croat, Lapp)
Ð	ð	– eth (Faroese, Icelandic)
ª	º	– feminine and masculine ordinal (French)
		– h stroke (Maltese)
		– kra (Greenlandic)
I	ı	– dotless i (Turkish)
Ł	ł	– l stroke (Polish)
Ø	ø	– o stroke (Danish)
Œ	œ	– oe ligature (French)
	ß	– sharp s, German double s, eszett
Þ	þ	– thorn (Icelandic)
		– t stroke

	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		0	@	P	`	p	^{4}	‘		°		—		ĸ
1	!	1	A	Q	a	q	ƒ	’	¡	±	`	^{1}	Æ	æ
2	"	2	B	R	b	r	‚	‹	¢	^{2}	´	®	Đ	đ
3	#	3	C	S	c	s		›	£	^{3}	^	©	ª	ð
4	$	4	D	T	d	t		“		×	~	™	Ħ	ħ
5	%	5	E	U	e	u		”	¥	µ	¯			ı
6	&	6	F	V	f	v		„	¤	¶	˘	¬		
7	'	7	G	W	g	w	ȷ	–	§	·	˙	¦		
8	(	8	H	X	h	x		—		÷	¨		Ł	ł
9	)	9	I	Y	i	y		–	‘	’			Ø	ø
A	*	:	J	Z	j	z			“	”	˚		Œ	œ
B	+	;	K	[	k	{			«	»	¸		º	ß
C	,	<	L	\	l	|	…	†		¼			Þ	þ
D	-	=	M	]	m	}		‡		½	˝		Ŧ	ŧ
E	.	>	N	^	n	~	‰	ﬁ		¾	˛			
F	/	?	O	_	o		•	ﬂ		¿	ˇ			-

Figure 4: The !Float character set

This character set also follows an International Standard (ISO-IEC 6937-1994) as far as it can. Lappish Eng and eng (EE and FE), Dutch IJ and ij ligatures (E6 and F6), Catalan L and l with centre dot (E7 and F7) and 1/8, 3/8, 5/8 and 7/8 (DC–DF) are not available in the Acorn base font although they are specified in this Standard. !Float positions the dots for the els.

Columns 8 and 9, undefined in the standard, provide room for some useful extra characters available in the Acorn base font, mostly in their standard Acorn positions.

6937 does not provide for comma-form cedillas or háčeks although it purports to cover the languages in which they are used. !Float provides them at 82, 90 and 91.

[3]Afrikaans	ê ë ô	[1]German	ä ö ü ß	[2]Romanian	â ă î ş ţ
[4]Albanian	ë ç	[1]Hungarian	á é í ó ö ő ú ü ű	[1]Samoan	ā ē ī ō ū
[1]Catalan	à ç è é í ŀ (Ŀ) ò ó ú ï ü	[1]Icelandic	æ á ð (Đ) é í ó ö ú þ (Þ)	[3]Scots Gaelic	à è é ì ò ó ù
[1]Croatian	ć č (Đ) š ž	[2]Irish	á é í ó ú	[1]Slovene	č š ž
[1]Czech	á č ď (Ď) é ě í ň ó ř š ť (Ť) ú ů ý ž	[2]Italian	à é è ì ò ù	[1]Spanish	á é í ñ ó ú ü
[1]Danish	æ å ø	[3]Latvian	ā č ē ģ (Ģ) ī ķ ļ š ū ž	[1]Swedish	ä å ö
[3]Dutch	ë	[3]Lithuanian	ą č ę ė į š ų ž	[1]Turkish	ç ğ ı (I) i (İ) ö ş ü [â î û]
[1]Esperanto	ĉ ĝ ĥ ˆ ŝ ŭ	[1]Maltese	ċ ġ ( ) ż	[3]Welsh	â á ê ë î ï ô ö û ŵ ŷ
[4]Estonian	ä õ	[1]Norwegian	æ å ø		
[2]Faroese	æ á ð (Đ) í ó ö ø ú ý	[1]Polish	ą ć ę ł ń ó ś ź ż		
[1]Finnish	ä ü [å š ž]	[2]Portuguese	à á ã ç é í ó		
[1]French	à â ç è é ê ë î ô œ û	[3](Latin America)	à á â ã ç è é ê ì í ò ó ô õ ú ü		

Table 1: Diacritics and special characters used in various languages

A characters in parentheses is the upper case version of the preceding character. Characters in square brackets are only used in words borrowed from other languages.

The accuracy of these lists is not guaranteed; some are more reliable than others. The superior numbers indicate estimated reliability than others. The superior numbers indicate estimated reliability, from [1] (best) to [4] (worst). I would be very grateful for any corrections, or reliable information about other languages.

family, enabling them to have diacritics positioned very easily.

In Draw, all you can do is type the diacritics separately and move them into position manually. You have to type dotless 'i's as appropriate, which isn't necessary in Impression etc. as !Float will convert them for you (see below).

You have to quit !Float if you want to get back to the Latin1 character set and default keyboard.

!Float with the Impression family

To properly convert areas of diacritics mark the required section of text then *Save selected text* and drop the file on to the !Float icon on the icon bar. A *Drag icon* box will be produced, from which you will drag the file icon to drop back into your document, replacing the first text

You can process large chunks of text all at once, without even having to think about where all the diacritics are.

A complication is that !Float needs to know what font is being used, because the adjustments are different for different fonts. If you have diacritics in text in more than one font, you have to process each section separately. The *Save dialogue* has radio buttons for you to tell !Float which font you are using. You don't need to worry about embedded bits of text in other fonts if they don't have any diacritics.

You can do all the text in bulk with !Float set for the normal font, and then do the odd bits in other fonts separately. This is quicker, and !Float doesn't mind redoing things – a vital ability if you are to be able to change your mind about font choice.

The *Save choices* option on the icon bar menu allows you to retain your selection of font as default for future sessions. The only fonts handled on the cover disc ver-

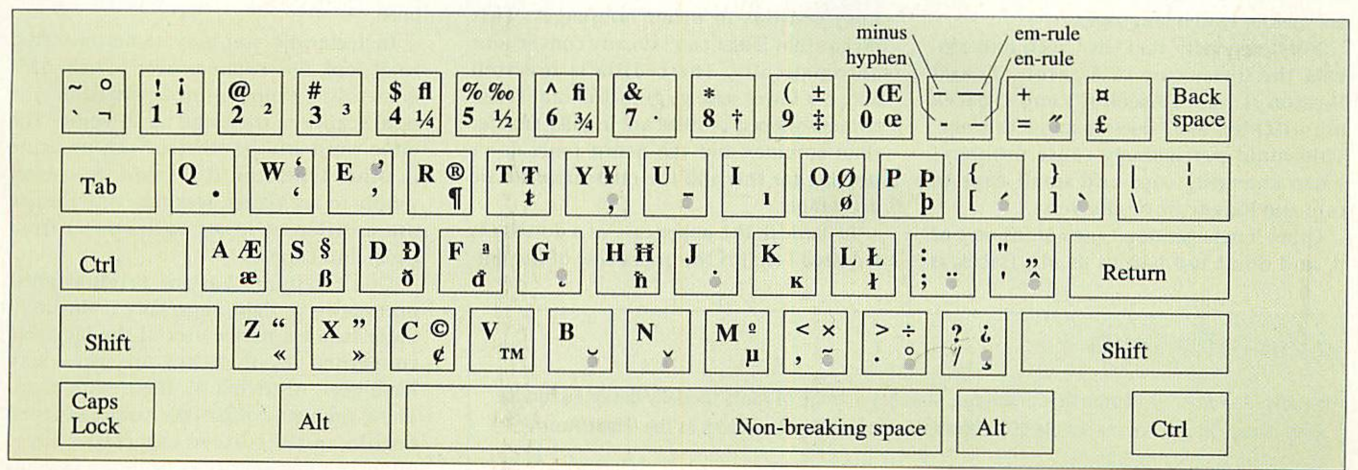


Figure 5: The !Float keyboard (pre-RiscPC)

All the diacritics are live – they appear as soon as you type them. Combinations that don't occur in any language known to !Float may not be positioned nicely by !Float. Diacritics are marked with a grey ring to distinguish them from similar characters: ~ swung dash; ^, hat; °, degrees; '', single quotes or apostrophe; ., full stop

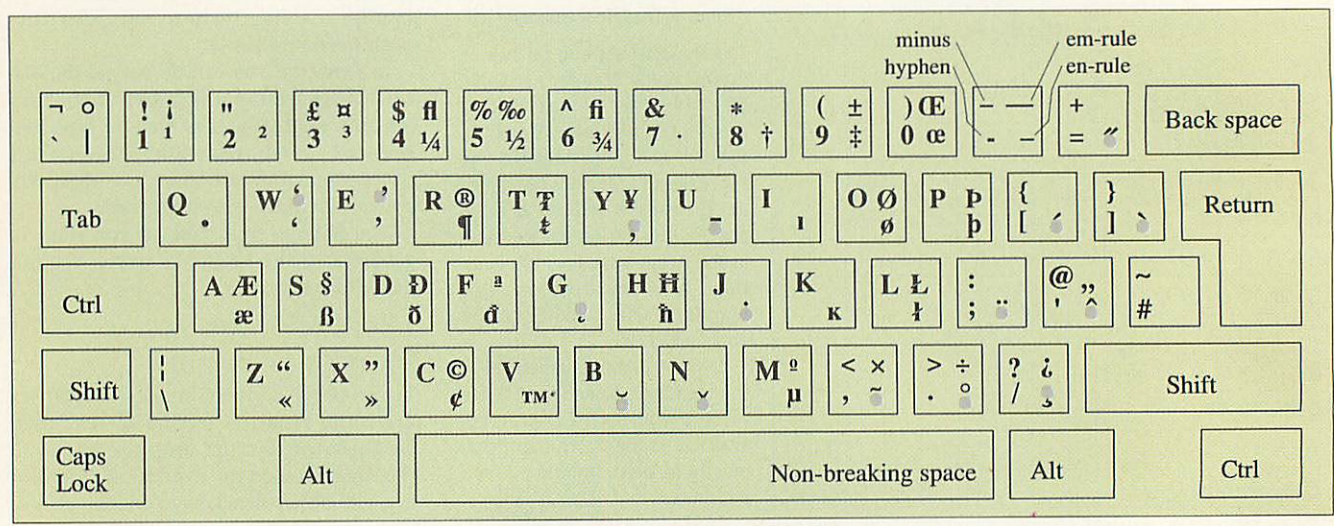


Figure 6: The !Float keyboard (RiscPC)

RiscPC users should select the *Risc PC* option and *Save choices* from the icon bar menu the first time they use !Float – otherwise they will get a slightly confused version of the pre-RiscPC !Float keyboard

sion of !Float are the Trinity, Homerton and Corpus families.

A Risc PC may hang if !Float is installed or quitted with !Marcel on the iconbar and a language font in use as the desktop font. Quit Marcel first, or use the System Font for the Desktop.

Also !Fresco loses the ability to display text if it is on the iconbar when !Float is installed or quitted. Quit !Fresco and re-launch it.

Traps for the unwary

If you are copying from handwritten manuscript or poor or small printing, it can sometimes be hard to make out the diacritics. It's then very useful to know which combinations occur in which languages. Sometimes you may be able to guess which language it is from the diacritics, and then go on to work out the illegible ones. Table 1 shows which combinations are used in which languages.

Note especially that, in Czech and Slovak, the lower case of T-caron (Ť) and D-caron (Ď) are t-háček (t') and d-hácek (d') – ISO-IEC 6937 doesn't know this one. This could particularly cause problems when changing caps and small caps to caps and lower case or vice versa.

Other languages don't use carons on t or d, and don't use háčeks at all. Háček is positioned closer to its letter than a following apostrophe would be in English; depending on the font it is likely to be at a different height too. !Float will automatically convert t-caron and d-caron to t-háček and d-háček – don't use apostrophes: obviously it can't be expected to know when to convert them.

Don't confuse carons (č) with breves (ă). Breves can occur on g in Turkish, on a in Romanian, and on u in Esperanto. Carons occur on c, s and z in a number of languages, and on lots of letters in Czech, but happily never on g, a or u in any language.

Ogoneks (ą) are Polish or Lithuanian, on vowels. This makes them easy to distinguish from cedillas (ç), which are used on consonants in lots of languages.

Romanian, Turkish and Latvian use comma-shaped cedillas (ş). Some occurences are on the same letters as ordinary cedillas in other languages. This means that !Float can't do any conversions automatically. The cedilla is inverted above a lower case g (ģ) in Latvian! These comma-shaped cedillas are usually smaller than commas, but the Acorn fonts don't provide for this and the ones supplied are acceptable.

In Turkish the upper case of a dotted i is a dotted I (İ); I is the upper case of the dotless i (ı). Double acutes (ő) occur only in Hungarian. Ordinary diaereses (ö) in Hungarian are not mistakes, though: it has both.

In Icelandic you may sometimes find what look like commas over vowels. This is merely a typographical variation, the significance is the same as an acute. The same word will be written with an acute in other typefaces. It is perfectly correct simply to use acutes. Icelandic and Faroese use a different lower case eth (ð) from Croat and Lapp ( ).

Don't assume that the original must necessarily be right, especially if the originator is not a native user of the language concerned. Even if they are, they may have been restricted by their equipment. These problems afflict the comma-shaped cedilla and the breve especially, these often being rendered as ordinary cedillas and carons respectively, even in otherwise well produced printed matter. Not everyone will care, but you're always safe if you get it right. AU

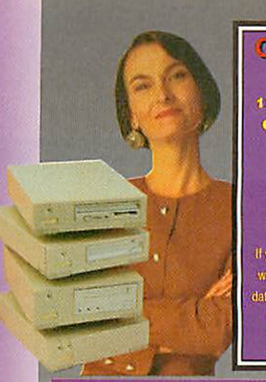
Clive Semmens is in charge of the DTP system (Acorn of course) at the Physiological Society, who publish the prestigious *Journal of Physiology*, the *Proceedings of the Physiological Society* and *Experimental Physiology*. He designed all their fonts (every font used in *J. Physiol* and *Proceedings*); their articles include numerous references in a wide range of foreign languages. He also designed all XenoPhilia's fonts.

This article was set on an Apple Mac system and as such took heroic efforts by the layout artist to get the accents positioned. The figures were draw files, the text was converted to graphics then ported via Artworks to Illustrator on the Mac.

XenoPhilia fonts

XenoPhilia Fonts, 53 Panton St, Cambridge, supplies a range of fonts specially designed for use with !Float. They have the whole 6937 character set (see Fig. 4), as well as the !Float/Acorn characters in columns 8 and 9.

The accents are non-spacing, which !Float can't do for the Acorn fonts; this means that they don't look too bad on lower case letters in Draw, without any need to move them manually into position.



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ACORN USER Printer Survey

The colour printer round-up in the last issue of *Acorn User* revealed the main difficulties with reviewing hardware – it's not the features that count, it's how the product stands up to prolonged use.

To compensate for that problem we're pleased to announce the *Acorn User* Printer Survey where you tell us how your model has performed and how the supplier's customer service has been – if you've needed it.

We appreciate you may not be able to fill in all the details precisely but please give an approximation. We'll collate and publish the results so you can decide what printer you'll choose next.

Only include printers which you are currently using and don't include those that have been obtained second-hand. If you want to give details of more than one computer please use a separate survey form. You can include printers that are used on non-Acorn machines.

Fill in the survey – you can photocopy it or use separate sheets – and send it to us at: *Acorn User* Printer Survey, IDG Media, Media House, Macclesfield, SK10 4NP. If you have access to e-mail you can send the survey to: auspecial@idg.co.uk but please ensure you put the word PRINTERS in the subject line.

Background

What sort of printer do you have?

Make_______ Model_______

How long have you had it and how much did you pay for it?

____

Where is it used?

☐ School ☐ Home ☐ Work ☐ Other___________

What do you use it for mainly (tick no more than two)?

☐ Correspondence ☐ Homework
☐ One-off reports ☐ Proofing
☐ Camera-ready copy ☐ Other___________

What do your typical print jobs consist of (you may tick more than one)?

☐ Text only ☐ Text with black and white images
☐ Text with colour images
☐ Black and white images ☐ Colour images

How many print jobs do you do each week? ___________

What printer driver do you use? ___________

Living with the printer

How easy was it to set up?

☐ Easy ☐ Fairly easy ☐ Hard ☐ Very hard

Were there any particular problems? ___________

____

How easy is it to use?

☐ Easy ☐ Fairly easy ☐ Hard ☐ Very hard

Are there any particular problems?___________

____

Does it fit well into your work area in terms of size, ease of access?

____

How much do you spend on your printer each month (include cost of inks, special papers and repair costs)?

____

Performance

How does the printer's speed match up to your expectations?

☐ Usually faster ☐ Usually slower ☐ As I expect

How does the printer's output match up to your expectations?

☐ Usually better ☐ Usually worse ☐ As I expect

Are there any areas where the output is particularly poor?

____

Are there any areas where the output is particularly good?

____

Has the printer broken down or otherwise failed?

____

Sales and Support

Who did you buy it from?

____

How good was the service of the dealer / manufacturer?

____

Was there on-site support?

____

How long was the warranty?

____

If you had to have your printer serviced/repaired under warranty, how did you find the service?

☐ Excellent ☐ Good ☐ Adequate ☐ Poor

Who did the service/repair?

____

If you had to have your printer serviced/repaired after the warranty expired, how did you find the service?

☐ Excellent ☐ Good ☐ Adequate ☐ Poor

Who did the service/repair?

____

How well do you think the printer lives up to the hype and the reviews?

☐ Better ☐ As good as ☐ Not as good ☐ Badly

Would you buy one again?

____

Conclusions

What are the three best things about your printer?

____
____
____

What are the three worst things?

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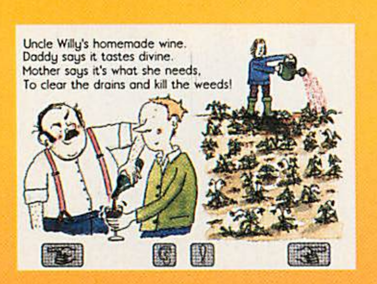
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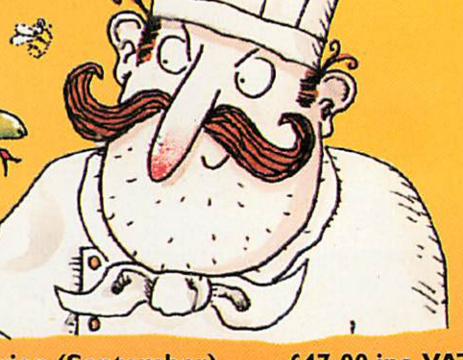
Ridiculous RHYMES

Written & illustrated by **Tony De Saulles**

Narrated by TV's **Tony Robinson**

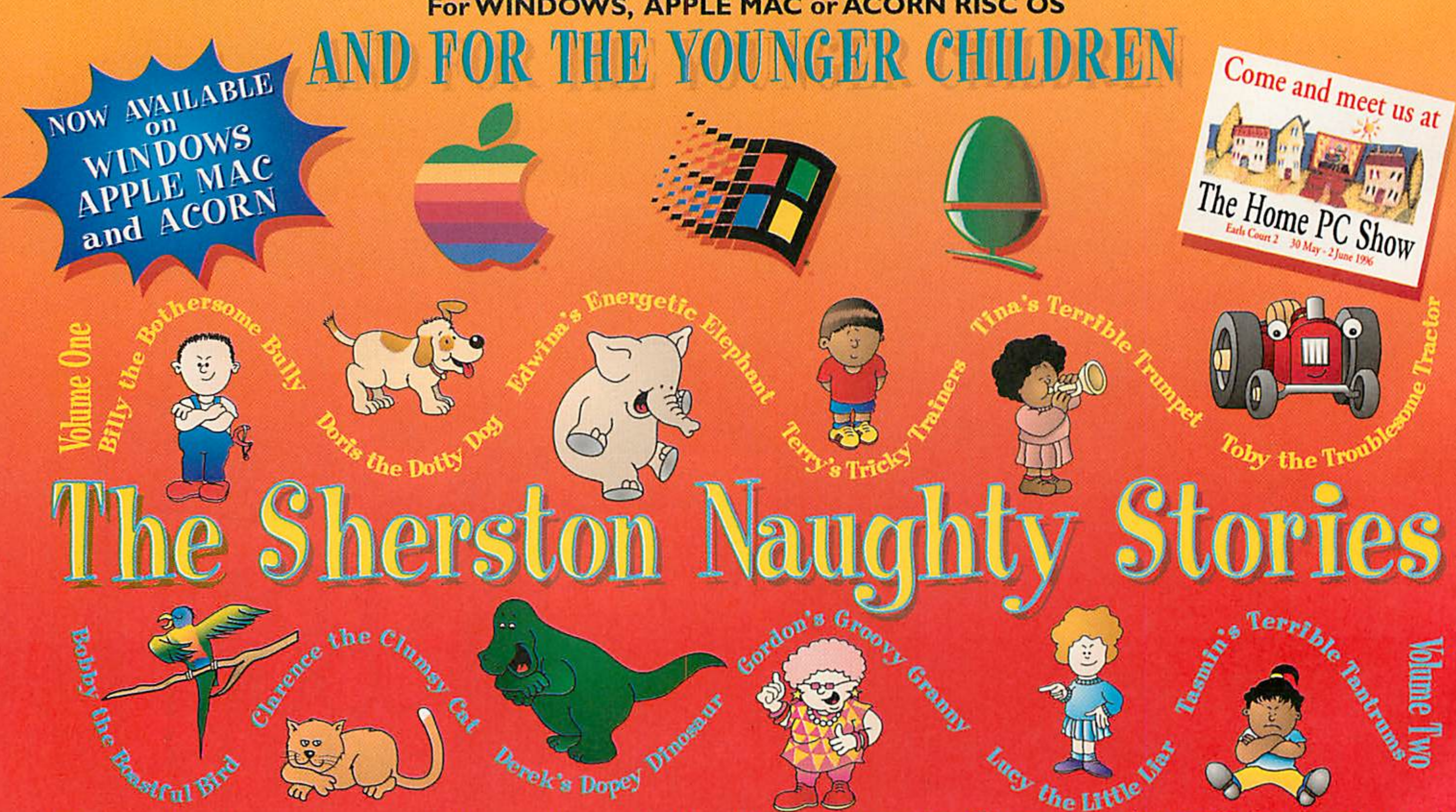






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Steve Turnbull looks at a system for dividing up a hard disc

Security measures

Product details

Product: PadLock (£49) PadLock Junior (£15)
Supplier: Base5 Technical Graphics, P.O.Box 378, Woking, Surrey GU21 4DF.

Keeping prying eyes out of sensitive areas of a hard disc is one of those things that has preoccupied both the owners of standalone machines and those people who want to satisfy those genuine concerns.

However it's never been an easy task. The fact is that any security system can be broken, and anything that's too intrusive will be either abandoned or used in a way that reduces its effectiveness.

Base5 Technical Graphics have come up with their own system entitled *PadLock* as a possible utility to ease the strain.

The scenario is familiar: Standalone machine, multiple users, potentially sensitive or private material on the hard disc. Let's first look at how PadLock handles the problem.

How it does it

First of all the supervisor (for want of a better word) of the machine must set up named groups and, within those groups, named users and each user has their own password.

Then for each group the supervisor has to set up a set of permissions and/or prohibitions based on file/application/directory name or filetype. So certain applications may be *permitted* while certain directories may be forbidden.

With *PadLock* running it puts its icon to the right of the Task Manager icon and continuously displays a small window in the bottom right of the desktop for entering the passwords and accessing the program.

A user comes to the machine, enters his/her password and then gets the accesses which are allowed for the group he/she belongs to.

In addition group accesses can be limited to a certain time of day so the password won't be accepted outside of those times.



Further configuration options that can be assigned to a group can limit access to the command line (through F12 or a task window) and Filer_Action is disabled preventing delete, copy and move.

Possible problems

With all these types of software mechanisms is that they can be bypassed by someone of sufficient knowledge. That's true, of course, for *any* protection system.

The question then is whether or not it's too easy with any particular system. Once *PadLock* is loaded it's tough to break, but getting at the machine before it's been loaded is a possibility (but see later).

Permissions and denials

The system of setting up the permissions for the different groups is fairly complex, perhaps too much so. It's possible to set up the system to deny all text files to a group and then individually allow access to certain files.

Alternatively (or additionally) you can deny access to specific files, applications or directories. The difficulty I found when I was setting these options was that it was fairly easy to make a mistake and permit access to certain files unintentionally, and once I'd done it I could not work out where the error lay resulting in the need to go back to square one.

Obviously a good supervisor would check all the options after he'd set them up but it was rather frustrating when an error appeared, and it would be easy to miss a combination.

Summing up

PadLock is a competent piece of software and I would recommend that anyone in need of this type of protection should take a look.

There's also PadLock Junior which provides single-user protection such that the machine won't work unless the password is entered. It does supply the !Bolt application.

In an ideal world the files that were unavailable would be hidden from view, however they aren't.

There is apparently no way for a user to have his own files protected to himself only, it can only be protected within his group and then only if a document is saved into a protected directory.

Good points

Base5 have gone to the trouble of using one-way passwords — similar to the PGP (Pretty Good Privacy) method of file encryption — the upshot of this is that a user's password is not stored with the application.

They have also developed a special module, called *Secure*, which they are making available to other software houses. *Secure* provides many useful features such as the installation of *alerts* which notify the application when various system events occur (screen blanking, specific Wimp messages and so on).

There's a Password Lifetime option which prompts the user to change his password after the limit has expired.

One of the additional features that has been implemented is the !Bolt application. What this can do is protect applications and the certain system files in such a way that if the specified objects are run or accessed when *!PadLock* is not running the machine will be made unusable.

To some extent this alleviates the problem of someone getting to the machine and preventing *PadLock* from running because key areas, but it's not perfect.

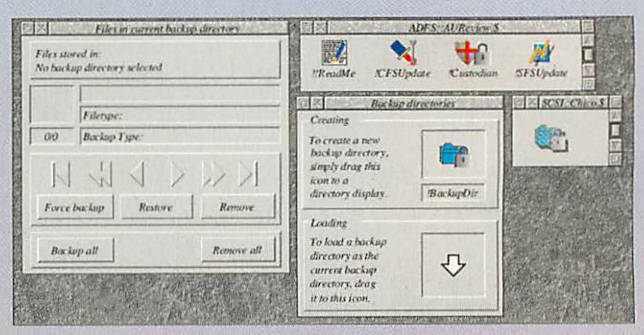
If the supervisor forgets his own password there is an option for a *transient supervisor* — Base5 can be contacted for a special one-off password which allows access into *PadLock*, the supervisor password can then be reset. The transient supervisor password is then changed (automatically) so if needed a new one can be issued, Base5 reserve the right to start charging if someone persistently forgets their password. AU

Taken into custody

A different sort of file backup system examined by Steve Turnbull

Most backup systems rely on you deciding to make the backup at specific times or, at best, having an alarm set-up to initiate the backup. *Custodian*, from Byte Back Computing, works differently.

Instead the idea is that you have the program loaded continuously and it has a list of files that it's supposed to keep backed up. When one of those files changes it automatically copies it using one of four backup algorithms.



During my tests the program worked fine — although I felt some of the windows were a bit overdone stylistically.

You specify a backup location which has to be available all the time so is most likely to be on another hard disc — doing backups to the same one is not entirely sensible. Then give the program a list of the files to keep backed up.

The algorithms available are: grandfather-father-son, continuous chronological, single copy and once-only copy.

The first gives you the last two versions,the second just keeps saving new versions which could use up a lot of space, the third just provides a copy of the last saved version and the last only copies the file once only — when you first tell *Custodian* about it.

The backup location can be a compressed archive created by !SparkFS, !ArcFS or !Compression, but if it isn't the program will use !Squash unless you specify no compression. If you use !SparkFS or !Compression you will also need to run the patch programs supplied.

Other features include optional delete detection so if the source is deleted the backups are removed as well, the manual points out that this is not too useful and is best not selected.

There were only two things I felt could be improved: When I work with *Impression* I always have the auto-save function operating and I'd prefer *Custodian* not to make backups as frequently as I save the work because I'm making my own regular backups to the original.

The other point is that my iconbar is already very crowded and I really don't want yet another icon — for which I seldom access the menu — stuck on it, so I'd really have preferred it to be invisible.

For me to use the program on a regular basis these two options would have to be fulfilled but I think, on the whole, it's a very worthwhile alternative to complete backups. AU

5

Product details

Product: Custodian
Price: £POA
Supplier: Byte Back Computing, P.O. Box 40, Nottingham, NG5 6SS
Tel: 0115-955 4501
E-mail: k.cooper@byteback.emnet.co.uk

Easy Wimp

Steve Turnbull investigates how useful Wimp Works really is

WimpWorks is yet another aid to Basic programming for the RISC OS Desktop but that in itself is a little unfair because this time it's not grossly huge and it manages to present at least some benefit to the programmer beyond just providing some pre-written routines.

What the system does is provide a complete Wimp shell plus an interface for creating procedures to be executed when specific system events occur. You create the procedures, plus any subsidiary ones using the built-in editor, the program can be saved and then run so that you can test it as you go along.

What's particularly clever about the system is the pseudo-keywords that it provides in addition to the usual Basic keywords, for example you can have GROUPSTATE, which returns the current setting of a particular set of radio buttons in a window, or REDRAW to force the redrawing of a window.

These extra keywords get translated into function and procedure calls when you save the program and yet, curiously, the fact that they're there in capitals produces a different effect than if they were presented as just another set of Basic routines.

All the commands have online help which supplies the parameters for the command and a brief description of what it does. The program makes extensive use of the PD WimpExt module and many of the additional commands are basic interfaces on to the WimpExt ones.

I tried out the system to create a simple application that runs the boot file of any application dragged to its iconbar icon. The resulting program took just twenty minutes to create, and that time was only due to getting to grips with the program.

Creating the windows

If you're going to be using windows — which most applications will — you obviously have to create them, the package is supplied with a copy of the PD program !TemplEd, although you can use any window editor.

Creating a program is achieved through a set of editors, the one for windows has already been mentioned. The task editor allows you to modify what will appear in the Info box, which sprite to use for the iconbar icon, whether the icon is on the left or right and whether to set some text under the icon.

The procedure (or subroutine) editor is the one that'll be accessed the most. Using it you can create three types of routine: A normal one which is simply named and will be called from somewhere else; a *call every* procedure which, curiously enough, is called at regular intervals, down to centiseconds.

The final, most important type is the *Respond to* which means the routine will be called whenever one of thirteen events occurs, see panel.

The exact procedure is that you create a new procedure by giving its name, which is stored separately, specify the type, and switch into the editor which brings up a standard edit window in your usual text editor. The name you chose will be the name of the routine and any parameters will have already been set up.

All the routines are held as seperate files within a directory which does lead to the problem of only 77 files being permitted at one time, however you can put more than one routine into one "module" so the problem can be avoided.

If it becomes a problem one alternative would be to change the OLE directory to, say, an ArcFS directory which allows any number of entries.

Editing menus

The menu editor is quite comprehensive and can produce all the varieties that are usually needed. Menu items can be set up to be initially ticked or shaded, lead to sub-menus, run a procedure when clicked or lead to the default Info or Save boxes.

A total of thirteen menu options can be set up which is enough for most purposes, and the thirteen doesn't include any dotted separation lines — any menu more complex should probably have sub-menus.

The menu identifier becomes a global variable within the program which contains the handle of the menu.

One of the more interesting features of WimpWorks is the ability to add WEMs — WimpWorks Extension Modules — which add additional keywords complete with their online help messages so, for example, a complete library of database handling commands could be designed and added, or a library for drawfile editing.

WimpWorks is excellent for creating small applications very quickly, and it could be useful for taking the first few steps on the ladder to learning Wimp programming. All that's needed now is a version that runs with the Toolbox and new resource editor. AU

The WimpWorks event codes

- Start-up
- Null
- Closedown (function)
- Iconbar click
- File dragged
- Help request
- File double-clicked
- Key pressed
- Save data
- Window clicked
- Unknown menu
- Window opened
- Window closed

Product details

Product: WimpWorks
Price: £POA
Supplier: Jaffa Software, 14 Worthington Close, Henbury, Macclesfield, Cheshire SK11 9NS

Detailed statement for Apr-96 - Jun-96
Account c (current)
All classes
All marks

Day	Ac	Ref	Cl	Description	Mk Rec	Debit	Credit	Balance
				Starting balance 1-Mar-96				0.00
				Starting balance 1-Apr-96				270.00
Apr-96								
1	c		s1	salary			700.00	970.00
3	c		r1	rent		200.00-		770.00
5	c		c1	cash		60.00-		710.00
8	c		c1	cash		40.00-		670.00
15	c	car	d1	direct debit		60.00-		610.00
16	c		c1	cash			50.00	660.00
28	c		x0	Trnsfer to Ac s		150.00-		510.00
May-96								
1	c		s1	salary			700.00	1,210.00
3	c		r1	rent		200.00-		1,010.00
15	c	car	d1	direct debit		60.00-		950.00

<Untitled> *

Account codes:
c Current
s Savings

Class codes:
x0 Transfers
c1 cash
c2 cheques
c3 credit card
s1 salary
s2 standing order
d1 direct debit
r1 rent

Insert Edit Delete Sort Postpone Std. entries Find Raise Lower Exit

Std Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb 3 entries

Day	Ac	Ref	Cl	Description	Mk Rec	Debit	Credit	VAT
14	c		s1	salary			700.00	
20	c		r1	rent			200.00	
21	c		d1	direct debit			14.00	

Money Manager

Karen Peach tries to get her finances straight

Financial management is not one of my better qualities so I hoped *Money Manager* from Wyded Software might at least help me organise my finances – little as they are. It is designed to help set up an orderly accounts system, recording financial transactions each month.

On loading *Money Manager*, a main window is displayed from where all the set-up and editing is done. Accounts (up to 20) need to be set up first for whatever you need, this can include anything from your current bank account and savings to credit card and petrol.

The type of transactions (up to 50) that will be made need to be defined, for example, cheques, salary, cash. Marks can also be chosen to help you identify entries, these might be expenses, business etc. VAT codes may be used if required. With these details entered data can be input.

To enter transactions highlight the month and then fill in the details as listed. Standard entries can be set up, useful for regular transactions such as salary, rent or direct debits. Transfers can also be made from one account to another quite easily. Both transactions and the set-up details can be edited, deleted, added to and sorted, so there is no problem if you want to account for new and different transactions in the future or even alter details of those already entered.

Money Manager has some time-saving short-cuts. It can postpone an entry until the next month although there needs to be an entry already in the following month to enable you to Postpone an entry forward. The Find option seaches from the selected entry onwards but only highlights the first link it finds after that date, you have to repeat the process to see if there are any more. It is also possible to copy an existing entry in order to base another transaction on that one.

At any time a detailed statement can be seen of specified months and a more precise statement may be displayed by choosing particular accounts, classes and markings.

The statement resembles a bank statement listing the transactions in date order and giving the balance after each transaction. Transfers will show on the statements detailing the amount that has been transferred to and from where.

Alternatively a class totals report can be generated for specified months. This shows the sum of all transactions made. It allows you to choose precisely the sections you wish to be shown: grouping classes, omitting classes altogether and even showing the amounts as percentages.

Reports can be saved into a word processor or DTP package and as *Money Manager* cannot print reports itself they can be printed from there.

Each data file will hold a maximum of 12 months data with up to 500 transactions each month. Adding new months is possible but the earliest month is deleted from the file, this can be saved elsewhere if required. When creating new files there is the facility to merge codes from another data file which saves setting up all the codes time and again.

Options from the icon bar menu include choices for automatic saving at timed intervals and automatic loading of a specified data file.

I felt that the manual needed to include more details on some actions such as setting up and using Standard Transactions. It does include a list of keyboard shortcuts and a few questions and answers which are helpful. The tutorial is useful to work through giving a good introduction to the package.

As with any accounting package its success and accuracy depends on entering every financial transaction made. *Money Manager* is suitable for a basic arrangement but can also be used for a more complicated accounting system as it can deal with numerous accounts, transactions and produce detailed statements. I just wish that it could arrange for a huge amount of money to be transferred into my real bank account.

Money Manager Pro should be available around Easter which will have a different data display and unlimited monthly entries. AU

Product details

Supplier: Wynded Software
Price: £24.95
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Tel: (01953) 604255

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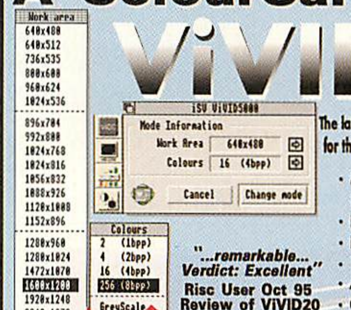
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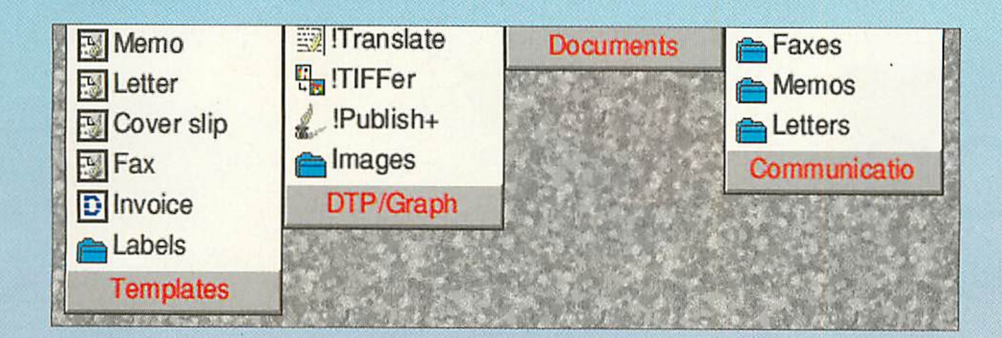
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Racking up the options

Karen Peach investigates a sophisticated and elegant way to access your programs on files

If you're fed up with endlessly searching for the file/application/directory you want, especially if there are particular ones you use often but stored deep within your hard disc structure, *MenuBar* by Graham Crow might be for you.

It enables you to organise files into menus to suit you regardless of where they are stored on disc. It is displayed at the top of the screen as a slim bar of pull-down menus. The maximum number of menus is 10 which can contain up to 30 items in each, although you can just have one menu if that is all you need. When too many menus have been set up for them all to be displayed across the screen, they will be 'telescoped' so that part of each menu title can still be seen and accessed - clicking on the menu title will bring it to the front.

Once *MenuBar* is loaded the menu strip is displayed; if you want a more detailed title than menu numbers you can alter it to a name of your choice. The title will remain in light grey type until you add items to the menu when it will change to red.

Adding items to a menu couldn't be simpler - just drag them from a Filer window, individually or as a selection and drop on to the menu title. These will then be listed above the title so that either the whole list can be displayed when the menu is pulled down or just as the title at the top of the screen when not in use. A menu can be opened by double-clicking select on the title or by dragging it down, to close either drag back up or double-click with adjust.

Items in the menu can be opened in the usual way, by double-clicking, and can also be dragged onto the desktop. You can also select several items at once, to run them all or remove them from the menu – this does not delete it from the hard disc though. The same item can appear in more than one menu if you desire.

Menu items will appear in the order you enter them. If you wish to re-arrange them there are several options: by dragging the item to its new destination within the menu, sorting by name (alphabetically) or by type. Sorting can be set up to work automatically when adding new items. Whole menus can also be repositioned on the menu bar so that each menu is where you want it.

A search facility is available which opens the menu highlighting where the search item can be found - opening all menus in which it finds the search item and closing the others. *MenuBar* will be unable to find an item if it has been deleted, renamed or moved on the hard disc – a red cross will appear in place of the drag icon and also in place of the file icon when *MenuBar* is re-launched.

You can load a file into a specific application by holding down Alt and dragging a file from a menu or from the Filer and dropping it onto the Application. By choosing *IconSprites in Choices the correct icon will be displayed for applications which have not been 'seen' by the Filer, the generic 'Application' icon will appear if not selected.

Including *MenuBar* in your Boot sequence will ensure that it is loaded on start up. It requires RISC OS 3.1 or greater to run.

MenuBar is great for organising what you require into an order that you can work with. It's unobtrusive on the desktop, easy to set up, use and alter. Basically it's up to you to arrange the menus in a way which is most convenient for you and I'd say its worth every penny. AU

Product details

Supplier: Beebug Limited
Address: 117 Hatfield Road, St Albans, Herts, AL1 4JS
Tel: (01727) 840303
Fax: (01727) 860263
Email: info@beebug.co.uk
Price: £11.95 ex VAT

Right on the button

Karen Peach examines a simple new program launcher



Buttons is an Easy Program Launcher from Lindis/Vision Software. It gives quick access to programs from a list of buttons chosen and compiled by yourself. It also provides a basic way of protecting the hard disc from being accessed by others and is designed for primary schools.

First you need to decide which programs you want accessed from each button. You begin with a blank button and fill in the details required. Then simply drag a program from the hard disc into the Drop Files Here box, which then separates into an icon, a description and also a list of tasks/files included in the complete button.

The description can be changed to however basic or detailed you require. On pressing OK the button is displayed on the desktop. To add more buttons you can Create before or after the highlighted button and repeat the process above. Any button details can be changed.

The maximum number of buttons you can have is eight and you can drop up to a total of eight programs into each button. When you double-click on a button all programs in the button are run which, if it's full, is a little overwhelming.

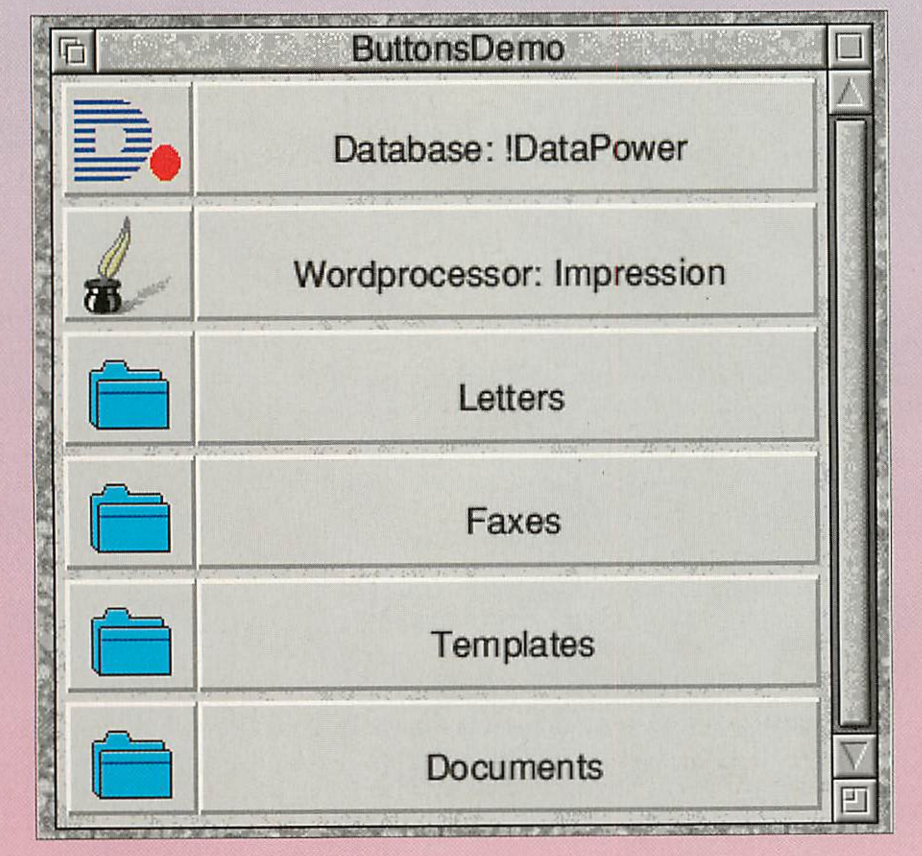
Buttons also has a security system which basically enables the teacher to restrict access to the hard disc, so that only the programs in the pre-defined buttons are available for pupils. Go to Setup and click on Protect hard disc – this removes the Hard Disc icon from the icon bar and leaves the buttons as the only available choices for the pupil. To make the hard disc accessible again just repeat the above and the icon will return.

If work needs to be saved on the hard disc while it is protected, a work folder can be set up for the pupils. The work folder will then appear in place of the Hard Disc icon on the icon bar.

A password method of protecting the buttons from being altered is available. You can also set up the computer so that *Buttons* starts up automatically when you turn it on.

For teachers, *Buttons* is quick and easy to set up. The instruction booklet is simple to follow, despite being incomplete in the Automatic Starting section for those using the A7000.

A new version is due out in a couple of months which will have complete instructions plus the ability to create a limitless number of buttons. It will also have a minimise function so that the button window can be reduced to an icon. AU



Product details

Supplier: Lindis International
Address: Wood Farm, Linstead Magna, Halesworth, Suffolk. IP19 0DU
Tel: (01986) 785476
Fax: (01986) 785460
Email: all@lindis.demon.co.uk
Price: £24.95 (ex VAT) for single user, £74.95 (ex VAT) for primary site licence



The making of the Jigsaw advert



Emil Brunavs explains how the Atomwide jigsaw advert was created

Commercial advertising is big business in today's fierce and competitive market place. Ideally, new and innovative eye catching advertisements should not only help sell products and services but also provide the reader with some entertainment value too.

So what has this got to do with the Atomwide Jigsaw advert? Well, not only was it voted best advertisement in the 1995 *Acorn User* Reader awards by you, it also helped sell a product which for some people held no true aesthetic value and, most important of all, illustrated the real potential of Acorn's Risc PC on which the advertisement was created.

It's important to put into perspective the technical requirements which your Risc PC should meet in order to work comfortably. I should point out also that the Jigsaw advert is in its entirety a bit image, which will occupy more memory space than an equivalent A4 sized picture built up using a mixture of vector graphics and bit images of the same resolution.

The actual size of the image will give an estimate of just how much free hard disc space is required and in most cases how much memory is required too. The original master image of the Jigsaw advert was created on an A4 size canvas in 24 bits per pixel (bpp) at an x y resolution of 360 dots per inch (dpi).

In actual fact a 3mm bleed border was also added to the standard dimensions of the A4 page size. Resulting in a file size of 52Mb. A single file of this size is fine if you are only going to hold one copy of it. However in the professional world this is a bit risky, so a backup copy is taken. Then throughout the duration of the project it is wise to keep copies of each major stage of the generation of the image, so that you can be flexible and at any time refer back to previous images.

By the end of the project it is not uncommon with a bit of good housekeeping to end up with over 500Mb of hard disc space used. Then there are the various image clippings which in the case of the Jigsaw advert used over 250Mb of hard disc space. So why do all these images take up so much hard disc space and is all this necessary?

It is important to know from the start how the final image is going to be printed and at what resolution. This will in turn determine the resolution and thus the size of output image. In order to obtain the best end results, the image resolution should at least match that of the printer, whether it is being output on an inkjet, laser, die sublimation printer or even onto separate colour film. If you are sending your artwork to a print bureau for the first time, it is wise to consult them on this subject first.

Decide the theme



You should decide upon some form of theme or idea of what the final image is going to end up looking like. When dealing with the full size image, you spend a lot of time just waiting for the computer to complete certain operations. Saving a 50Mb image can take upwards of a minute, even if you are using a fast hard drive and DMA SCSI card. Initially experimenting with small low resolution doodles to give you some ideas can save hours of hard work should you abandon an idea while using the full size image.





The Jigsaw advert was built up from a collage of images taken from a Photo CD which Atomwide Ltd kindly supplied. Each image was originally taken by a professional photographer in a photographic studio on 3 by 4 inch transparencies. These were then digitally scanned and then saved onto Photo CD by a professional imaging company. Until you have seen first hand the results of a professionally shot transparency viewed off a Photo CD, the cost may seem a bit steep.

On average at around a couple of hundred pounds per image. Obviously this can

vary drastically depending on the subject matter and which photographers you use. Expect to pay up to £2,000 for a multi-subject photo shoot spanning only a couple of days. Good quality, high resolution images are used in all the glossy publications – take a closer look next time you are in a newsagent.

To accentuate perspective depth in the Jigsaw advert, I used four layers. The first of which was a cut-out section from a 400 series ethernet card, taken at four times the base Photo CD resolution. This formed the background to the whole advert. The second layer, an A3000 and A400 series ethernet card, network tap socket box and Risc PC keyboard were used – all at base Photo CD resolution.

Adding the individual components of the second layer on top of the first layer was achieved by cutting the images out of their backgrounds and pasting them on top of the first layer. In practice, using Spacetech's Award winning *Photodesk*, one can use the very powerful sampling tool to either spray or brush on the parts of the image that are required.

Using a combination of the airbrush and Adjust button undo feature, a very realistic junction between the subject in layer two and its new background in layer one can be achieved. Alternatively the use of a mask and the magic wand tool, can in most circumstances produce the same results. Although the latter method is by far the easiest and quickest, it is sometimes impossible to use. As the almost convincing flames emerging from the underside of the 400 series ethernet card illustrate.

Initially, I experimented to find the best and quickest process, using a small, low resolution test image. The full size image can take some while to move about the screen, even if you do have 64Mb of DRAM and 2Mb of VRAM fitted to your Risc PC. Alternatively, using *Compo* from Clares, it is possible to arrange the individual objects over the background until the correct positioning has been achieved.

Lighting the way

Before committing to the full size image, I adjusted the relative focal depth of layer one by blurring it slightly. Making the objects in layer two stand out more against their new background. Note also the significance of the effective ambient lighting on the objects in layer two. This is a very subtle but powerful effect which can be used when creating realistic-looking collages.

Where possible the brightest light source should be from one direction only. In the Jigsaw advert the light is mainly emanating from the top of the page. To coincide with this, I have, using an airbrush, added a drop shadow on the keyboard under the A400 series Ethernet card. Although this is mostly covered up when Layer four is added, one would subconsciously notice the drop shadow's absence.

The selective oblique angles of each object in layer two were deliberate, so that they did not clash geometrically when the jigsaw emboss and text were added to the image. If you are involved with the original photo shoot, you should be aware of the lighting, perspective and camera angles, even at this early stage, as you see, it will help in generating useful photographs for use in this context.

Layer three is the jigsaw emboss shown in the second picture. Unfortunately on the Acorn platform algorithm programmed mathematical effects processes do not exist. So I had to shade every curve by hand. The curves were originally created using Computer Concept's *Artworks* application. Hand-drawn with the Freehand drawing tool and adjusting the Accuracy level it was possible to create a jigsaw-type pattern, then rotating and copying the pattern several times, ending up with a matrix of jigsaw like pieces all grouped together.

This matrix was saved out as a Draw type file and then imported into *Photodesk* as a mask. After some considerable fiddling with the resizing of the matrix until it completely filled the page and the pieces were of the correct size and in the right place, the mask pattern was then rendered on top of the image.

Then in order to use the mask effectively for the shading, I used the magic wand to fill in every other jigsaw piece with a solid mask. I could then shade all the exposed areas without contaminating adjoining jigsaw pieces.

Then invert the mask and repeat the shading process until all the jigsaw pieces were shaded. Shading was achieved by using a set of custom-sized air brushes and the black and white colours from the colouring effects panel.

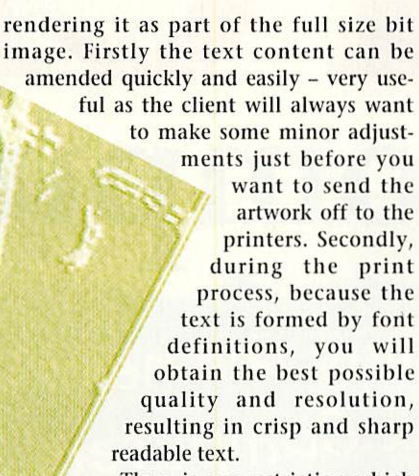
Cutting the pieces

To create the floating single jigsaw piece I needed to take a cut out, including mask, from the main image and manipulated it on a separate canvas. Remember that the mask which I had created, could be inverted to expose or mask off alternating jigsaw pieces but I needed to manipulate only the single jigsaw piece which was to be the centre of the cut out and not the adjoining jigsaw pieces. So I masked off all the adjacent exposed jigsaw pieces leaving only the centre jigsaw piece exposed.

The floating jigsaw piece including the mask could then be cut out of the full size image and processed separately. The side effect of using a mask when cutting out a section of image is that the parts of the image which are masked out become plain white in the cut out section, exactly what I wanted.

The processing involved rotating the jigsaw piece including the mask to the required angle. A copy of this stage was taken and the canvas was then filled with plain white, leaving only the jigsaw shaped mask. I then, with the use of the mask and cloning effect, pasted only the white shape of the jigsaw piece back onto the full size image.

Then again with the help of the mask and cloning effect, pasted the jigsaw piece on top of the white piece, slightly offset to the top left. By subtly shading the white extremities with black, the floating jigsaw piece now looked as if it had some depth to it. Finally spraying on a drop shadow enforced this effect. To complete the whole jigsaw effect I filled the hole which the single jigsaw piece came from with a neutral pattern colour.





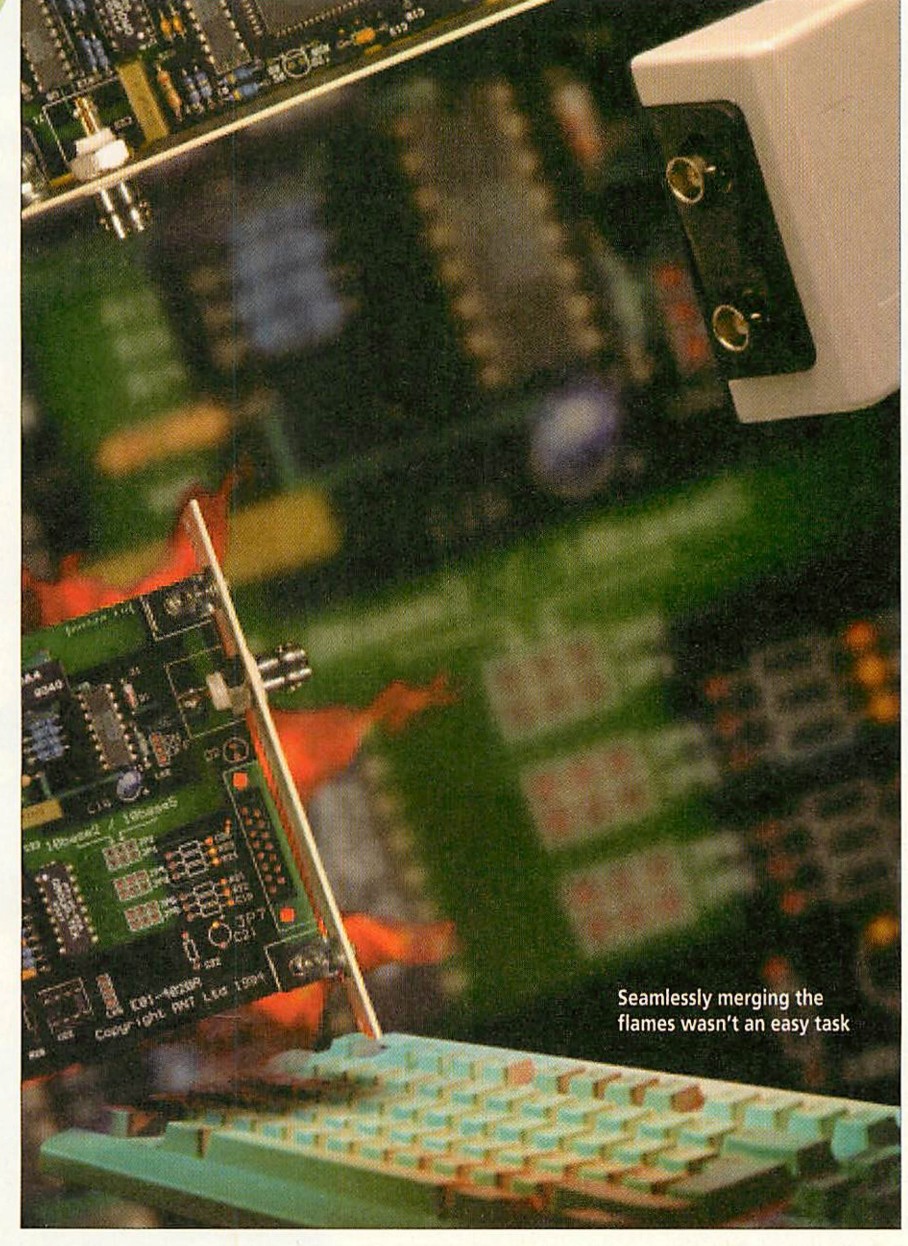
The final layer consisting of the text was dealt with in two ways. The title at the top of the page and the Atomwide logo at the bottom were created as part of the rest of the bit image. The remaining text was generated and layed out using Computer Concept's *Impression Publisher*. The full image was then inserted into a frame in the same document.

The Atomwide logo at the bottom of the page was a spin off from the experimentation I did when designing their current header logo on the Atomwide Web pages. The original plain black and white draw file was rendered as a mask onto a plain white canvas. Then using the air brush tool and the emboss effect, I sprayed over the masked off lettering which produced the strange-coloured effects on the letters. Using the air brush again and black colouring effect, with inverted mask, I sprayed on the black rubbing type effect. Getting the colour depth just right, so that it is not too dark or too light, is plain trial and error.

Using a document processor for the text content has two major advantages over rendering it as part of the full size bit image. Firstly the text content can be amended quickly and easily – very useful as the client will always want to make some minor adjustments just before you want to send the artwork off to the printers. Secondly, during the print process, because the text is formed by font definitions, you will obtain the best possible quality and resolution, resulting in crisp and sharp readable text.

There is one restriction which is inherent in document processors which do not use virtual memory or the Risc PC's dynamic memory allocation slot, which *Impression Publisher* suffered from when the Jigsaw advert was created: The document cannot exceed 28Mb in size. Considering that the full size image was 52Mb in size I had a choice to make, either render the text as part of the bit image or reduce the dpi of the bit image to fit into the 28Mb limit and use font defined text.

I opted for reducing the dpi resolution of the bit image so that it fitted the 28Mb limit and kept the flexibility of last minute editable text. The latest version of *Impression Publisher* supports dynamic memory and when used in conjunction with Clares *Virtualise* application which extends the functionality of the dynamic memory area to virtual memory on hard disc, extremely large images can be imported into *Impression Publisher*. Make sure your print bureau can cope with this though – but that's another story. AU



Seamlessly merging the flames wasn't an easy task

Offer open to Acorn User readers only

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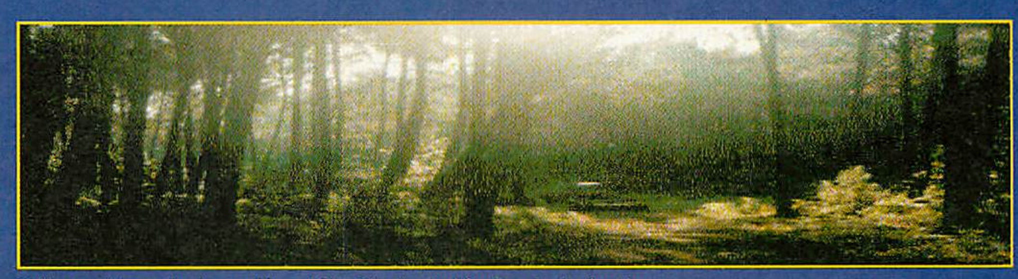
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GAME SHOW

Following the *Adventureland* article that appeared in February's issue of *Acorn User*, I've received a great response from readers who were looking out for more interactive fiction in which to immerse themselves. I'm aware that this subject has suffered from a recent lack of coverage, but I'm pleased to announce that Graham Nelson has just joined the *Acorn User* team.

Creator of the *Inform* programming language and author of two particularly popular games, he'll be covering all aspects of the subject from hints and solutions to design ideas so if you're harbouring any deep questions about interactive fiction, now's the time to get them answered – send them to Graham here at the Game Show.



Kalkazor: Atmospheric graphics add to this classical fantasy text adventure

Games News

I've received another dollop of information from Paradise about its forthcoming game, *Inferno*. As I mentioned last month, your task is to extinguish the raging blaze that's consuming a nuclear power station before it goes critical and takes half of the planet with it. Various upgrades are available, ranging from the all-important security passes to give you access to hidden areas to laser bonuses which allow you to protect yourself against the security droids patrolling the complex.

I'm told that the game will run at 50 frames a second, even on ARM 2 based machines, and the good news is that it will be released as budget software at a price of £9.99, so it shouldn't make any large holes in your wallets. If you want to get in touch with the Paradise team, you can write to them at 57 Beecham Berry, Brighton Hill, Basingstoke, Hants, RG22 4PB.

Although this next game is more in Graham's line of expertise, I'll mention it here because it's still in the processes of development. Written by Max Palmer, *Kalkazor* is a classical fantasy text adventure with a healthy dose of graphics, and is written using the ALPS adventure system.

The game opens in the midst of a war in which the dark forces have been slowly gaining the upper hand – it's rumoured that the great magician Kalkazor would be capable of vanquishing the demons' power.

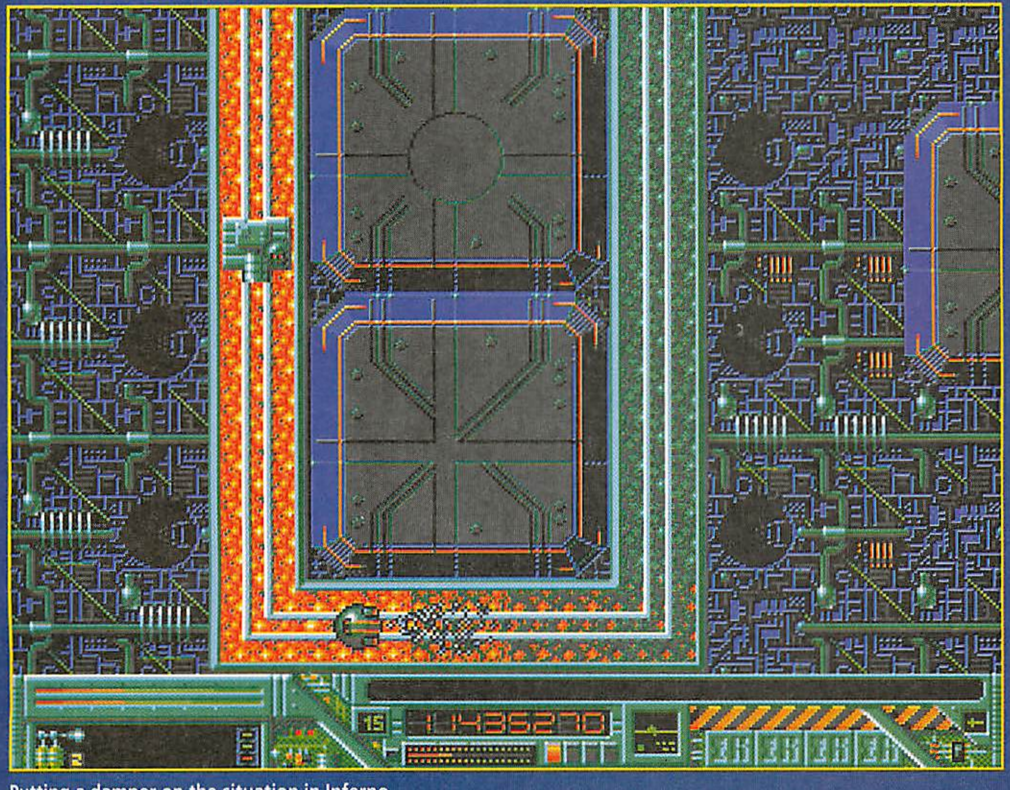
However, he's not much use at the moment, mostly because he's currently made of stone due to a rather crafty trick that was played upon him. It falls to you to seek out the sorcerer and restore him to the land of the living, so that he might turn the tide of the war and prevent the demons from conquering the land.

I've had a brief look and I've liked what I've seen – the room descriptions are full of detail and the graphics add a good atmosphere. I'll send this on to Graham for his perusal and we'll let you know when it's close to being released.

TBA are going from strength to strength with their 3D graphics engine, TAG. The original version has been upgraded substantially since their last game, *The Cobalt Seed*, and there are plans to boost the system further to cope with any number of colours in any resolution, Gourard and phong shading as well as textured surfaces and translucency. They also claim that the system will take advantage of any extra processors your computer might have in order to boost its graphics capabilities.

I have to confess that I'd like to see this in operation – does anyone out there own a machine packed to the brim with ARM700 chips yet? Finally, it turns out that the two games I mentioned last month, *Merp* and *Mirror Image*, will be sold together in one box. TBA will also be releasing Peter Ottermann's *Proposal* in the near future, and they're working on a *Doom* clone, a racing game and a title in the *After-Burner* style named *Acceptable Rate of Loss*.

All three will use TAG version 1.5 so should show significant graphics improvements over their earlier



Putting a damper on the situation in Inferno



Cybermoch: Just ladders and levels?



– not quite

products. TBA have an e-mail address, so if you want to ask them for information or send feedback on their games, you can contact them at Martin@tbalond.demon.co.uk.

One last bit of gossip – I've been talking to the people at Eclipse, and it turns out they're quite keen on the idea of creating a CD-ROM version of Darkwood – so Ecklebert the wizard might be making a reappearance. I've heard a few players mention that they thought the game's landscape was a bit small, so if the CD version goes ahead it could give a welcome boost to the playing area and the range of puzzles it presents. As soon as I get any more details, I'll pass them on.

The New Generation

Geoff Holland from Generation Design has just sent me a copy of *The Last Cybermoch*, their latest product, along with a demonstration of *Sea Trek*, a 'collect the coins' game currently under development.

The Last Cybermoch is a platform game at heart, and involves the main character leaping from ledge to scrolling ledge while avoiding, or obliterating, the aliens which happen to get in the way. The plot tells the story of the near destruction of the Cybermoch race, and follows your race for survival as you try to escape the planet before it explodes. There's an energy meter that drops throughout the level, and you have to replenish this as you progress by shooting blocks and collecting the apples that fall from them.

The targets are arranged in groups here and there, and when they're like this they have to be shot in sequence to proceed. Geoff and his team have included several twists that they hope will keep players interested – in the later levels, for instance, the blocks that contain the apples are invisible and a good memory of the earlier sections is required.

The gameplay is straightforward, although the control of the character can feel a bit clumsy at times. The scrolling of some of the objects, such as the horizontally sliding platforms that crop up every now and again, doesn't feel quite right – for instance, as you leap towards one of these moving ledges in order to traverse a chasm, it appears to slow down, and this can throw your timing out.

The game costs £9.99 but a shareware demonstration version is available. Geoff Holland and the Generation Design team can be contacted at 2 Whitecliff Gardens, Blandford Forum, Dorset, DT11 7BU.

And finally

As I write this, I'm waiting for Eclipse's ecological strategy game *Global Effect* to sail through my letterbox, and next month I'll be presenting you with a full review – watch this space, as they say. As always, if you've got any playing strategies you want to share or questions you'd like us to tackle, the address is the Game Show, Acorn User, IDG Media, Media House, Adlington Park, Macclesfield, SK10 4NP. For those of you with Internet access, you can also reach me by e-mailing azimuth@argonet.co.uk.

Problem Corner

I've had a letter from R. Atkins sitting on my desk for longer than I care to remember, and I think it's about time I dealt with it. He's having problems with *Cannon Fodder* in general and more specifically, 'In at the Deep End' on the ninth mission.

I could offer the built-in cheat mode at this point – choose the *Load Game* option and enter the word JABULA for a level skip feature – but it isn't particularly rewarding and so I'll turn to you to ask for help. If you consider yourself to be a Cannon Fodder veteran and you fancy sharing tactics with the rest of us, write in to the usual address and I'll compile a battle plan.

Many thanks to Eric Bowns for writing in with a solution to the problem faced by Gary Hughes in the Republic of Nauru. You may recall that Gary's computer was in danger of being hurled out of the window due to certain frustrations encountered with the BBC game *Labyrinth*. Eric has come to the rescue with an immortality poke, so if you want to take advantage of it, type in the following:

```
*LOAD Labyrin
?&3723 = &AD
CALL &5D00
```

That takes me back – in my earlier hacking days, I spent hours trying to find an infinite lives cheat for *Snapper*. Invariably, I ended up poking large and graceless holes in the program, and corrupted ghosts started walking through walls as Snapper himself wandered into the uncharted depths of the BBC's memory. Still, it was great fun – until the machine crashed.

The Teaser

Graham Nelson, Acorn User's very own interactive riddler, starts off a new column dedicated to the noble art of adventure

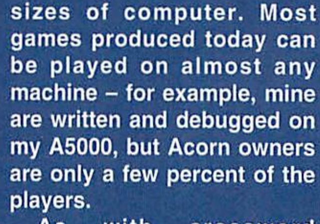
How to begin? 'Welcome to Adventure' is the traditional greeting of such a game, at once both friendly and challenging, like an examiner's handshake before the driving test. Two lines of text later you may be stowed away on a submarine crash-diving to the ocean floor, or hanging by your fingertips from an Alp. If things are really bad, maybe World War III is about to break out.

Then there are the games which open on a facade. Everything appears normal enough, apart from the fact that all the first-class stamps on your letters are triangular and green. Your wife is not around and nobody seems to believe she ever existed. There's a fire station where the library used to be, and vice versa. What has happened to the world?

Those crises are at least hardly your fault. The subtler torment is to arrive in a quiet, Cézanne-painted meadow. The entrance to the old tin mine is not too far away, but only a fool would explore it alone – as the opening text makes perfectly clear. Whatever happens then is your own fault.

The people who make Star Trek call this moment the *teaser*, the scene jammed in before the opening titles in case our attention span won't stretch to 20 seconds of credits. This new column's teaser is of the first kind, throwing you, the reader, into a predicament. Your mission (should you choose to accept it) is to write a short adventure game for *The Grand Acorn User Interactive Fiction Competition*. Fame, glory and the opportunity to be published on our next CD ROM await plus a prize, currently undetermined.

Adventure games have enjoyed a renaissance in the last three or four years. *Interactive fiction*, as the genre is now called, has a growing worldwide following almost unique in the way that it cuts across all models and



sizes of computer. Most games produced today can be played on almost any machine – for example, mine are written and debugged on my A5000, but Acorn owners are only a few percent of the players.

As with crossword puzzles, there are secret addicts everywhere. One player I know is both blind and deaf. Others have learned English just to be able to play the games – though German, French, Norwegian and Spanish adventures have all been written – so there's an international community of players. I once wrote a scene set on Lenin's famous train journey to Russia in 1917, and a regular commuter on the Helsinki to St. Petersburg line wrote back to tell me what the train is like today. Apparently, it's almost exactly the same.

The text adventure is the

For more information

To join the Internet IF community, look up the newsgroups *rec.arts.int-fiction* for discussions on game design and *rec.games.int-fiction* for questions and answers relating to game play. The excellent worldwide archive for free games, software and information is the *if-archive* at the FTP site *ftp.gmd.de*.

If you haven't FTP access and would like a copy of the Inform design system, including example games and an interpreter to play the commercially available Infocom games under RISC OS, write to the Game Show including a stamped addressed envelope and a formatted disc and we'll send you the relevant programs.

The Rules of the Grand Acorn User IF Competition

- Write a short text-only adventure game. Any style or genre is allowed. We're looking for games that show originality as well as creating a good atmosphere.
- 'Short' might mean having 10 to 20 locations and something to do in each of them. A good player ought to be able to win through in one rainy Sunday afternoon.
- Don't use characters or situations from books still in copyright, or from films or television. A parody is legal if you change all the proper nouns.
- Your game must be playable on an Acorn machine under RISC OS – either send us an Inform-compiled story file or a stand-alone program which can be clicked on to run.
- Along with the game, send a file containing a solution – that is, a list of commands which will win the game if played through.
- You retain copyright on your work, but grant *Acorn User* permission to include it on a future cover disc or CD ROM. If you've used a commercial package, please check that you're allowed to distribute the run-time code in this way.
- Send your entries, by July 1 please, to the IF Competition, Game Show, *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield, Cheshire SK10 4NP. If you've got any questions, just drop us a line.
- Entries may also be submitted as uuncoded archives by e-mail to *aucompo@idg.co.uk* put **IF Competition** in the subject line and ensure you include your full name and physical address.

first really new literary form to appear since the development of the modern novel three hundred years ago. The reader is the hero and the book's ending is entirely down to the decisions he or she takes. As in Thomas Hardy's novels, 'character is fate' – but unlike the novel, interactive fiction can explore a host of *what if* alternatives. These are still very much the early years and most games are just written for fun. Like graphic novels, they're not quite taken seriously yet – still, they often succeed as literature despite themselves.

But why write one? There's a real satisfaction of creating a world which other people come to believe in — and in building it to last. Many adventures fifteen to 20 years old are still played, at a time when every computer then existing is now obsolete. Many games will still be here 20 years from now – technology does not overtake them. Since the early 1980s, every practical computer has had all the power and memory a text adventure could sensibly need. Today, a game which may take a player months to solve will fit into less memory than, say, a typical Risc PC font cache. No quad speed CD Rom drives are necessary here.

On another point, and quite unlike most games of today, no budget is required to make something with a professional look and feel. No teams of composers, graphic artists, actors or cameramen are needed: only a story, the confidence to go ahead and program it, and some friends willing to play-test the result for you.

How should you begin, then? It saves some time and effort to use an adventure design system – a programming language tailor-made for putting games together, such as Alpine Software's *ALPS*, or my own system, *Inform*. The latter is one of the two design systems currently in widest use, the other – called *TADS* – being unavailable for RISC OS.

However, you can always code up the standard rules of play yourself. My own habit is always to start a new game by writing the teaser, that opening sentence or two of text. This sets the mood for what will follow and after that, perhaps a trip to the town library is in order. Soon it's a matter of laying the foundations. That's the subject of next month's column, so here ends the teaser.



Typical Teasers

The place: Upper Sandusky, Ohio. The time: 1936. The beer: at a nickel a mug, you don't ask for brand names. All you know is that your fifth one tasted as bad as the first.

Leather Goddesses of Phobos: Infocom interactive fiction – a racy space-age spoof.

This first teaser belongs to *Leather Goddesses of Phobos* by Steve Meretzky, written in 1986 and about as racy as the cover of a 1930s issue of Amazing Stories. This is a classic *something's about to happen* teaser, and sure enough our player is about to be abducted by Martians. Oddly enough, NASA spent last month test-landing its new Mars Pathfinder probe – at Sandusky, Ohio.

It's become a matter of pride now not to give up. That tourist map of Paris must be up here somewhere in all this clutter, even if it has been five years since your last trip. And it's your own fault. It looks as if your great-grandfather was the last person to tidy up these lofts...

Curses – An Interactive Diversion

Regular *Acorn User* readers might remember my own *Curses*, written in 1993 and included on the August 1994 cover disc. This time the teaser is of the 'here's your mission' type – you have to find a tourist map, which sounds easy enough. But the first of many diversions has arrived; why not explore the lofts?





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FEATURE

I wrote that...

Jason Tribbeck has written games, music software, half an Internet suite and a utility to give you longer file names on the Desktop, as David Matthewman finds out

Waistcoats are a common sight on the VTi/Argo/Eclipse stands at Acorn shows. You'd think, therefore, that identifying Jason Tribbeck as 'the chap with the waistcoat on the VTi stand' would be no help at all. You'd be wrong.

Jason is always the chap with *the* waistcoat – the one that's loud enough to drown out the music from VTi's MIDI card, or Eclipse's latest game which coincidentally Jason also wrote. His first involvement came when VTi (then Vertical Twist) gave him some MIDI cards to play with and he wrote *MIDITracker*.

MIDI networks

Well, almost. Most people when they get MIDI cards use them for outputting music. Not Jason – he had a far better use for them; blowing the stuffing out of someone else at a computer across the room.

'The first thing that I did with the MIDI cards was write a multi-player tank game, for which I had a system called *MIDINet*. This allowed up to 32 machines to be connected together in a token-ring network using their MIDI cards (which were relatively cheap). At the local computer club we set up nine machines all playing each other on this tank game.'

Battling for Arrakis

After successfully converting *James Pond II* for Eclipse, Jason was let loose on *Dune II*, a game of which the source code alone ran to about 176Mb.

'I waited nine months before I gathered the courage and the strength to start doing it, and even then it took me three months to get the first version out. It's a big regret that we didn't get it ready for the Wembley show in 1994, but the first version was only completed in December. In fact, it was about six days before the last post for Christmas, and there was a huge effort to get the discs duplicated in time for everyone to get their Christmas presents.'

Unusually for the Acorn platform, a CD-ROM version followed. For this, Jason also had to write what amounted to a MIDI synthesiser for the music, because the game was written for a PC Soundblaster card, and most people buying the game would not have MIDI cards in their machines. 'In theory,' says Jason, 'there's no reason why you can't take the code from *Dune II* and use it to play the input from a MIDI keyboard through the internal speakers, except that I've tried it and it doesn't work.'

Outside interests

Jason now has a set of C libraries that constitute a complete RISC OS development environment, which have been used for all his programs since *Talking Canvas Junior*. It's called *RiscOSView*, and is based on a program called *XView* for X-Windows. It works on the principle of building up a set of standard libraries which can be used with any program. *RiscOSView* will be released as Freeware when Jason's finished it. It's currently about 20,000 lines of code, but may almost double in size when Jason adds support for the *Toolbox* modules in it.

Apart from software for *Eclipse*, Jason has written for other companies and for the Public Domain. He knocked up a label printer for Software 42 'in an evening', and himself runs a company called ARM Designs which is separate from Eclipse.



Jason Tribbeck attended the University of Essex and became an expert at the University's 18-hole frisbee course while working for VTi in his spare time. He vaguely remembers doing some academic work; at any rate they gave him a degree

One of the projects that he's designing for this company is a hardware-independent filing system. This has as its centre a processor on a card which controls the drive; the host operating system issues commands like 'delete this file' and the on-board processor does all the actual work.

This has two advantages: first, the host processor has a reduced load and second, the on-board processor can be sitting 'idle' for periods during which it can independently compress files on the hard drive in the background.

Perhaps Jason's most well-known product is a small PD application that he wrote one night 'to see if it could be done'. This allows you to have file names of up to 55 characters in Filer windows, useful for most people and an essential tool for Web designers.

'There was someone on one of the newsgroups complaining about the 10-character file name limit in RISC OS. I thought about how you could do it, and the result was *LongFiles*. I released it and people seemed to like it – I don't use it myself, because I don't trust it. I know what it does, and some of the kludges aren't pretty...'

Jason and the Argonets

Jason's most recent project was the *Voyager* software for Eclipse's new venture selling Internet connections as Argo Online. Jason had already written a dialler to log on to his Demon account, which promoted him to the position of Internet guru at Eclipse, and he ended up writing far more than the dialler for *Voyager*.

'It looks like one coherent project, but there were six or seven programmers involved in it, and there's 27 'applications' in the suite, including all the configurations. I wrote about 13 of them – and a library that someone else finished up using – including the module that enforces standard error and password boxes on the rest of the program.'

Much of *Voyager* was based on existing PD software – the Internet stack is a cut-down version of the Freenet stack with the Ethernet card support removed – but about 80 per cent of it is original code. Reconciling the various programming styles of the people involved can cause a few problems.

The next release of *Voyager* will have printing built in, using printing code written by Jason in C. However, two of the programmers involved use BASIC, and are therefore having to bolt their code onto code written in an unfamiliar language.

Mars, the bringer of war

Over the next year, Jason will be working on a game called *WarZone*, similar in concept to *Dune II* but based on modern times using tanks, troops, helicopters, troop carriers and so on. The game's animation will be designed on SGI SparcStation by Jason, with music done by Jason's brother using a title theme based on Mars from the Planets Suite by theme.

The game will be released simultaneously on Acorn and PC platforms, probably on a dual-format CD-ROM; most development will be done on the Arc, with the code then ported to the PC. At this stage, development of *War Zone* has progressed just as far as painting and photographing some Airfix models of tanks, but expect more details of *War Zone* to start seeping out in a few months. Jason's even considering making it network friendly, so that you can play other people. Well, you've got to have *some* use for that MIDI card, haven't you? AU

Jason Tribbeck 'discography'

Early work

Ubiquitous: This was a 'sort-of-game' that Jason wrote at school, which allowed up to 15 players to shoot missiles at each other. It was called *Ubiquitous* for no better reason than that Jason had always wanted to write a game called that.

ETG: Officially called *Epic Trading Game*, but secretly *Elite-Type Game* for those in the know, this involved flying around between planets shooting spacecraft and buying and selling goods. Some early screenshots were posted to Arcade, but the game was never finished.

Work for VTi/Eclipse/Argo

MIDITracker and *Desktop Tracker*: These were two programs allowing you to play Tracker music files, a format which originated on the Amiga. *MIDITracker* allowed you to play the files through a MIDI keyboard and was Jason's first commercial program. *Desktop Tracker* was ground-breaking in that it allowed up to 16 voices and ran in the Desktop, and is still sold by VTi.

VTX-2000 synthesiser board: Jason designs PCBs in his spare time, and this was one of them.

Xenon II: The Desktop front-end only.

Robocod: Infamous because the Tracker player was rumoured to play a section of the music 'upside down', this was Jason's first full conversion, and a very successful game. The *James Pond* Thames Water project followed for Skillsware.

Dune II: Both floppy and CD-ROM versions.

Global Effect: Desktop front-end and password protection only.

Talking Canvas Junior and *Sonor*: Both of these work with VTi's Sound Byte parallel port sampler. *Sonor* is a powerful sample-editing suite and *Talking Canvas Junior* allows samples to be linked to pictures in a simple multimedia presentation.

Voyager: Jason wrote about half the modules and designed the software's 'look and feel'.

Work for other companies

James Pond Underwater Agent: Teaching children about the Thames Water Ring Main for Skillsware.

PD/Freeware

Guest: This was written a long, long time ago, and allowed you to have icons for all your applications on the icon bar at once without having the application in memory. It was written up for the sheer hell of it, and to scare Jason's Amiga-owning friends about the memory in his machine.

A laser harp program: Jason is a keen Jean-Michel Jarre fan, so this one was inevitable, really.

Longfiles: Allows up to 55 characters in a file name – this one was on the first *Acorn User* CD-ROM.

In the pipeline

RiscOSView: a RISC OS development library written in C, which Jason's used for most of his recent software.

Drivers for the IOmega Zip drives.

War Zone: An original game on CD-ROM, to be developed on both PC and Acorn simultaneously. (and a number of things we can't talk about yet).

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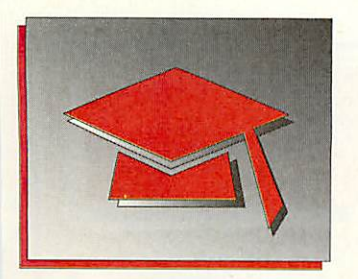
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I told you so!

Last July I reviewed CSH's CD-ROM, *The World of Robert Burns* and concluded that this product is so good it would inevitably receive some awards. It therefore comes as no surprise that it has just collected its second award exactly one year after launch. After being voted *Acorn User* Best CD-ROM for 1995, *Burns* has now received the prestigious Primary Gold Award.

Launched to coincide with the Burns bi-centennial celebrations and developed in close collaboration with Dumfries and Galloway, *The World of Robert Burns* is a highly interactive program covering all aspects of his life and works.

Congratulations to the CSH team, including their advisors for the project. It was a mammoth undertaking which has been brilliantly executed and is a credit to you all.

Just one question... how can a company such as CSH, who have a proven track record of producing innovative educational software such as this, not be an Acorn Education Dealer/Agent?



Robert Burns wins another award

Industry-driven software

FOR as long as I've been involved with computers, programs produced by industry have been commercially available for use in education. I recently reviewed a product by the Meat Marketing Board and have mentioned the excellent simulations by the RAF.

I recently took a phone call from a marketing company (not associated with either of the aforementioned programs) asking how their products were used in my school. The short answer was, they're not. The fact is that unless the software is written with specific national curriculum attainment targets in mind, teachers will, in the main, avoid them. Whether they are right to avoid such software is a debatable point, but the fact remains that Information Technology coordinators look at ATs first, and price second.

More Acorn help

FOLLOWING on from the success of *The Acorn Companion*, Geoff Love has written *The Acorn Companion 2* which is aimed at RiscPC and A7000 users. My first impression of the book is that the quality of reproduction is vastly improved from his first book (and another similar style book on networks by someone quite close to me).

The book follows the same formula as before – everything you need to know to get you going, then some hints and tips to get you beyond the novice stage. Anyone who uses an Acorn computer and wants some answers to basic questions without having to delve through several manuals, need look no further. The book is available from SEMERC.

SEMERC Tel: 0161-627 4469

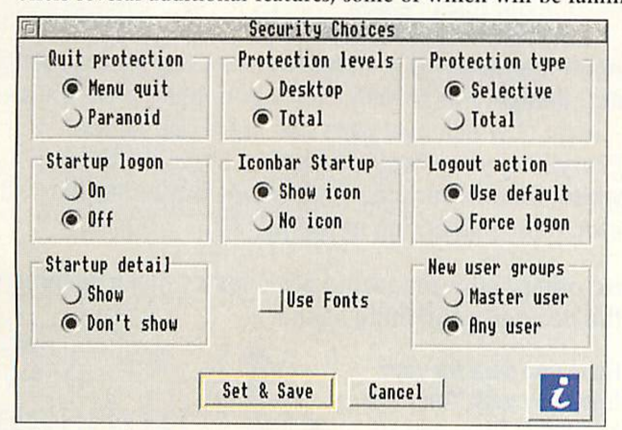
Secure your software

DATA protection seems to have gone off the boil recently. In case anyone is in doubt, there is still a law to protect individuals who have personal data held on computer. The most likely breach of that law in schools is that of disclosure – allowing data about one person to be read by another. The problem often occurs when the teacher's computer is used by a pupil who then opens the hard disc and goes for a fishing trip.

I've used *SecureIt* ever since it was launched as it is an easy way of stopping people using your computer, and especially accessing files which may contain sensitive material. Although efficient, it was a little unsophisticated in parts and so has now been revamped and become *SecureIt+*. The latest version offers several additional features, some of which will be familiar to network users like hidden directories. Having a locked directory which can only be accessed with a password is fine, but making the folder invisible until a password is entered is much better. There is also a great deal of on-screen help for setting up the software and there are various levels of protection from minimal to paranoid.

SecureIt+ is rather like a gear-lever lock for your car: it'll stop the casual opportunist, although the professional will usually be able to get around it. But at less than £30, it's well worth it to prevent pupils seeing what they shouldn't.

Cambridgeshire Software House
Tel: (01480) 467945



Help stop prying eyes

Best wishes Mike

I WOULD like to take this opportunity to wish Mike Matson and 4Mation best wishes for the future, whatever that future may be. It was Mike who first spotted my (*Draw*) talents when he enlisted me to produce some files for *smArt* and later some animations for *Noot*. Best wishes to you both.

Contacting me

You can contact the Education page by writing to me, Geoff Preston at Acorn User, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP or by e-mail to: gpreston@arcade.demon.co.uk

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A pirate's life for me!

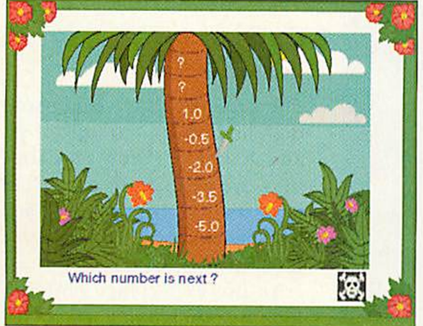
Joining the pirates, as Colin Rouse discovers, is great fun

Storm Educational Software's new offering, *The Calabash Pirates,* is an interesting new package on a rather different theme. The object is to join the pirate gang – Natty Nick, Soggy Sam, Lost Luke and Dagger Jack – to find lost treasure that has been hidden on a long lost island, encountering many problems along the way.

You land on a desert island with a map and a parchment scroll describing the position of a treasure chest. As the pirates travel round the island in search of treasure, you will encounter mathematical and geographical puzzles. This requires the use of problem-solving techniques, decision-making and planning. There are three levels of difficulty which can be played many different times. If you succeed at these puzzles, you will be rewarded with extra pieces of silver and gold.

Solving the puzzles

There are lots of different puzzles to solve in the *Calabash Pirates* which will test children with a wide range of ability. In Calabash roaming, the user is given a map of the island, directions have to be followed, using a compass and co-ordinate points, to discover the location of the treasure chest. Once this is done, the island may be explored. Moving round, using compass points and scale to look for treasure, can be very rewarding. At random, short activities appear to test the user's skill and knowledge.



What's the number? *The Calabash Pirates* in action!

The degree of difficulty is determined by the level being attempted. In Number Sequences, the next number has to be worked out which, at the higher level, can be negative.

In Word Search, three words have to found within a specified time limit. Historical Questions have to be answered here, from a multiple set of answers, connected with this historical period.

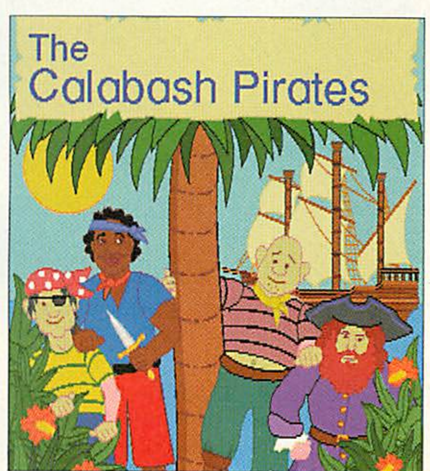
Patch the Sail is an activity where triangular pieces of sail must be put together in the right colour combinations. At the highest level a mirror image of the sail must be made. The triangles may be flipped both horizontally and vertically to make them fit.

The Riddle of the Sands contains mathematical problems where the numbers have been swapped for symbols. At the highest level, different number bases have been used. An additional problem is the tide, which is coming in to wipe out the questions. The Cannon Game is another mathematical activity where cannon balls have to be fired at a target where the numbers hit must add up to a given amount.

A certain amount of logic has to be used in the Raft Rescue. A collection of logs have to be arranged in the correct order, by matching the coloured shapes on the ends, to make a raft to rescue Lost Luke within the time limit!

The Tacking activity sees you become a sea captain who must navigate your boat between two sets of high cliffs. Compass points and angles must be used to help you zig-zag your way through. At the highest level, the whole course must be plotted before the boat can sail.

Other options include saving and reloading, the current page may be printed, either the mouse or keyboard may be used and the level of play may be changed at any time. There is also an option to give on-screen help, should it be needed.



Yo ho ho! The pirates are here!

In the classroom

The *Calabash Pirates* would fit in well with any topic which includes this period of history but, in my opinion, it is worth using it to help children understand the mathematical concepts it develops. It presents all the activities in an interesting and fun way, making them enjoyable to attempt while meaningful in content.

The children in my class can't get enough of this program, which has stimulated a lot of work away from the computer in a variety of curriculum areas, at differing levels including mathematics, english, art, history and geography.

This is a useful software package which is well-presented and fun to use. It has a good user manual and some very useful ideas for further activities. In my classroom *The Calabash Pirates* has been very successful in supporting the curriculum. My children and I recommend it. AU

Product details

Product: The Calabash Pirates
Supplier: Storm Educational Software
Tel: (01935) 817699
Fax: (01935) 817699
Price: £25.99 for single user, double for site/network licence
Pros: Fun to use • Informative • Challenging
Cons: None spring to mind!



What colour green is this?

Geoff Stilwell discovers how Pocket Books can be used at school



The Pocket Book has been heralded as 'the way forward' in educational computing; an affordable way of giving a computer to every child. However, schools still don't seem to have enough money to buy basics let alone sets of Pocket Books.

I was asked recently to help a primary school who had been given 30. They had been put in a box in the stock cupboard and no one felt confident enough to find out what they could do.

I was very fortunate to have won a Pocket Book at the Acorn World Show in 1993 and I use it extensively to store information, word process, develop spreadsheets to help with accounting and other matters, and the Schedule program helps me organise my life.

Where to begin?

When the school asked me to help I didn't know what to suggest. I'd seen presentations at the Acorn stands at shows demonstrating how the Pocket Book could be used effectively on a school journey, but this was for secondary school pupils. I decided to get some help from Geoff Preston, education editor for *Acorn User*. Geoff is a secondary school teacher and was also doubtful about how primary school children would take to the Pocket Books although he did make a few, what proved to be, very useful suggestions.

When initiating projects in school I am inclined to start lower down the age range so that the children with the knowledge and expertise are not lost at the end of the year. However, the teachers with the inclination to learn about the Pocket Books taught year 6. We combined a vertically grouped class with the year 6 class so altogether there were about 54 children.

No shortage of enthusiasm

The children were very keen to use the Pocket Books. There were enough for the children to share one between two which worked very well. The children were quick to learn the basics. They were also very adept at setting an alarm, so I would advise teachers to remove the Time application with the Acorn+Y keypress, as I did before the computers were given back to the children. 'Out of sight, out of mind'.

We all began doing some word processing using the Write application. This provides a good starting point for teaching all the basics: using applications, starting new files, moving around documents, deleting, marking, cut, copy and paste functions and saving files. That session lasted the whole morning.

Developing a database

One of Geoff's ideas was to develop a database using Cards by collecting data from the school's environment. Both the year 6 teachers felt that a database on the subject of Plants would fit in very neatly with the science work that was going on in the classroom.

In the next session we looked at the Cards application, using the default Cards file to enter the children's names and addresses to explore how the Pocket Book could manipulate the data. The Pocket Books we were using wefe the original version 1 so data manipulation is limited within Cards, although we did explore the browsing and searching facilities.

The next step was to start developing our Plants database. I firmly believe that the most important work with computers is actually done away from the computer and the database is the prime example. It must be carefully planned. We put the Pocket Books aside and focused on the Plants database.

We had talked about what a database was and then focused on the fields we were going to use; what were we actually going to look for when we went out to collect the data? We 'brainstormed' the idea first and used most of the ideas generated to specify the fields.

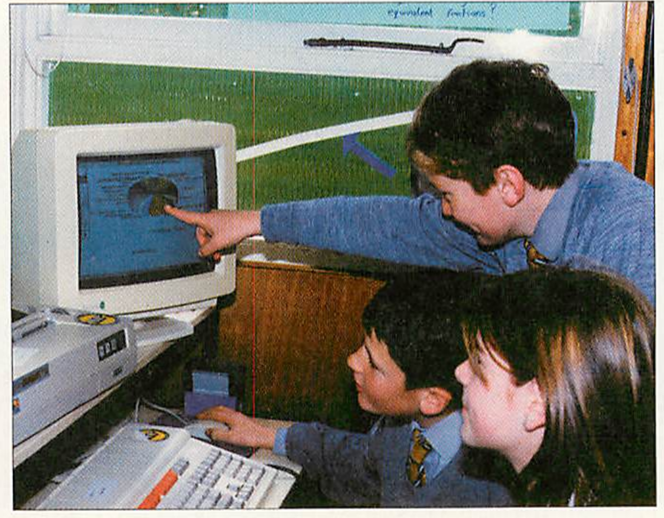
The main problem with databases and children is inconsistency. When looking at the fields we also considered what the children would put into them. Would it be a number? What units? Would there be a limited list of choices or could they be descriptive? We hoped that this would limit potential discrepancies.

The planning process complete we returned to the Pocket Books to start a new Cards file called Plants and edit the Labels, making sure that each pair of children had got it right was very time consuming.

Gathering information

The next day the teacher split the children into groups of six and I took a group at a time into the grounds of a convent next door to the school. Each pair worked separately with their own Pocket Book.

In my experience children look but they don't see, and if nothing else the database exercise forced them to be much



Seeing the results in the classroom

motivators

more observant. Obviously some children saw more than others but everyone filled in the fields with as much detail as they could manage. Each group had about half an hour to collect data. Most pairs managed about four records in that time.

I'm no expert on plants, so the field to enter the name of the plant most often had the word 'Unknown' in it. We hoped that the children would be able to use books in school to identify the plants from the descriptions they had given in the database. The children also took a clipboard and some paper to make simple sketches of the plants, leaves and flowers.

Late Autumn is probably not the best season to be collecting information about plants as there was very little in the way of flower, fruit or seeds. However, it was surprising, even to me, how much one can find growing in and around a stone pathway and on the side of a building.



Gathering information for a plant database

Back in the classroom

Back at school we used an A-Link to upload the data on to the class's A3020. The files were converted by the A-Link software, PocketFS, into CSV files. We merged them all together by dragging them one by one into the first file using Edit.

The school have a copy of Longman Logotron's child-centred database, *Junior Pinpoint*. This is an excellent database package for creating a set of records from scratch – based on a questionnaire type of page format. It is less flexible for importing information from another database, although, by making sure the two databases are exactly the same, it is possible.

I created a new database in *Junior Pinpoint* with the same fields as the Pocket Book version. I gave long descriptive names to the fields to make the *Pinpoint* database user-friendly for the children and also defined short names that the program used to specify each field.

Before we could import the data into *Junior Pinpoint* I had to create a header line in the CSV file which contained the short titles of the fields already defined in *Pinpoint*, each one separated by a comma, making sure I had the same number of titles as I had fields. Dragging the CSV file into a PinImport window we were able to see in the consequent list that the fields matched up. The files were imported without further complication.

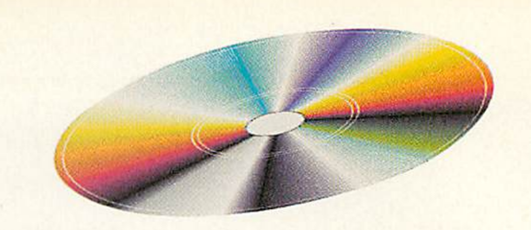
Our browsing through the data within *Junior Pinpoint* showed up the children's spelling mistakes and inconsistencies. This problem could have been tackled at the Pocket Book stage but seeing everything together helped the children see how a single space would make a difference when it came to sorting the data.

The children did not find it easy to understand the need for consistency until we produced a graph based on the Colours field. The predominant colour of the plants found was green but the graph showed that practically every plant had a different colour. One was described as green, another as light green, another as greeny brown and another as green brown.

There is undoubtedly a lot of work that could still be done using the database. Books could be used to identify the plants from the descriptions and sketches, and names could replace the 'Unknowns'. Some of the fields could be made more consistent, and meaningful graphs drawn showing, for example, where different plants were found. Basic questions arise such as 'Why were there no seeds, fruit or flowers?'

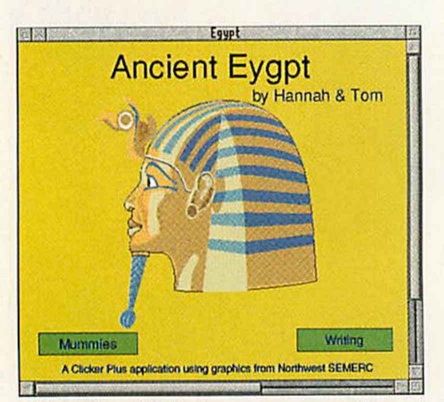
The Pocket Books certainly motivated the children to get out and explore their immediate surroundings and now they are confident in using them there is no telling what they will used for next.

Thanks to Mrs Joyce and Sister Brenda of St Vincent's Primary School, The Ridgeway, Mill Hill, London. AU



Alternative authoring

Geoff Preston looks at some alternative programs you could use to produce multimedia presentations



Clicker Plus will display text and graphics and can display very creditable presentations.

Clicker Plus

This program is a development of *Clicker* which was originally conceived as a program to enable text to be input using the mouse. Grids can be created which may contain letters, words or whole sentences. Move the mouse pointer on to the letter or word you wish to type, click the mouse button and the text will be printed at the carat. *Clicker's* ability to load one grid from another means there is theoretically no limit to the size of a set of linked grids.

Clicker Plus, and its switch-control alternative, *Switch Clicker Plus*, has one significant additional feature which makes it suitable for multimedia production: its ability to handle graphics in the form of *Draw*files and sprites. This means that *Clicker Plus* could be used to create some very creditable multimedia presentations.

Two further features are that *Clicker Plus* can output computer generated speech and *Switch Clicker Plus* can be controlled from a single on/off switch enabling users with physical impairment to operate the system. The only drawback at present is that there is not a freely distributable read-only version of the program, nor anything within the software to generate a stand-alone presentation. This means that people who want to use your *Clicker* presentations must first buy *Clicker*.

Clearview2

This is described as a hyper-linked document reader and is a neat way of displaying lots of pictures and text with hot links for cross-referencing. There are two versions, the most familiar probably being the one supplied as a means of displaying and retrieving the high quality clip art produced and supplied by DEC_dATA. That version is a read-only and is public domain (although the accompanying clip art and text is not). The second version enables multimedia presentations to be created. At the time of writing, DEC_dATA had just about finished a CD-ROM developed using *Clearview2*.

It has several useful features, plus the ability to load one file from another which reduces loading time, especially over a network and it is also easy to extract the resources. As well as text and pictures, *Clearview2* will also support sound in a variety of formats.

If the content of your presentations are mainly cross-referenced text with supporting pictures and some sounds, *Clearview2* could be the right package – especially in view of its price: £40 including postage and VAT.

Notice Board

Different from the others *Notice Board* will display pages of text and graphics as a sort of automated slide show. It could be used in a variety of ways, including displaying subject linked clip art. The end user has no control over what is seen, but the person compiling the production has a variety of effects and delays to choose from.

This is a simple and cheap program which, if nothing else will give would-be multimedia authors some valuable practice in page layout.

Impression Style and Publisher

Well it isn't really a multimedia application but the OLE function (Object Linking and Embedding) can make it behave a little like one. For example, *Impression* cannot 'read' files created by *Vector* (4Mation). If you try to drop a *Vector* file into a graphic frame in an *Impression* document, an error message is given telling you that the filetype isn't understood and asking whether you want it inserted as an embedded object. The answer is yes. The *Vector* icon will be displayed in the graphic frame. By double clicking Select on the embedded icon while holding Ctrl, the file will be loaded into *Vector*. This means that a page of text can have an assortment of sound, movie and graphic files embedded in it and the user simply holds Ctrl and double-clicks Select to see or hear the files.

Next Month: Putting your work on to a CD-ROM. AU

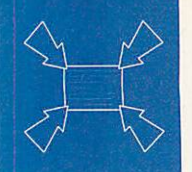
Product details

Product: Clicker
Supplier: Crick Computing
Address: 123 The Drive, Northampton, NN1 4SW
Tel: (01604) 713686
Fax: (01604) 713686

Product: Clearview
Supplier: DEC_dATA
Address: 60 Danes Road, Exeter, EX4 4LS
Tel: (01392) 221702
Fax: (01392) 221702

Product: Impression
Supplier: Computer Concepts
Address: Gaddeston Place, Hemel Hempstead, Herts, HP2 6EX
Tel: (01442) 63933
Fax: (01442) 351010
Email: info@cconcepts.co.uk

Product: Notice Board
Supplier: The Really Good Software Company
Address: 39 Carisbrooke Road, Harpenden, Herts, AL5 5QS
Tel: (01582) 761395



Free Ads

• Acorn Risc PC 600, 9Mb, 210 HD, CD-ROM drive, Impression Style, PC card, Scanlight Video Animator, ProArtisan + lots more. £2200 ono (inc delivery to UK). Tel: (01983) 883188 - IOW.

• A5000 4Mb RAM, 120Mb HD, Eizo 9030S multiscan, VIDC enhancer, sound upgrade, Impression publisher, PC Emulator v1.6, games, software, excellent condition, £950. Tel: (01734) 419372.

• Wanted. BBC Acorn User magazines. April to December 1989. Errors in 'Codename Droid' sought. Decent price paid. Tel: (018907) 50862.

• Risc PC 600, 4Mb HD 425, AKF60 monitor. Hardly used, original packaging £1000. Prophet 2 £90, Data Power £50. Tel: Reading (01734) 426843.

• Risc PC 600 for sale, 21Mb with 486DX280 PC card, CD-ROM, with Artworks, Impression, Studio 24 and Studio 24 Pro and CorelDRAW! 3. 3 years on site warranty plus extras. £2000. Phone Steve on (01793) 491360 after 8.30pm.

• A5000 4Mb, AKF18 monitor, 2 x 540Mb HD, SCSI interface, 330Mb external HD (SCSI). Midi/sound sampler interface, 486 PC card. Lots of software. Boxed c/w manuals. £1200 ono. Could seperate. Tel: Trevor (01775) 710640.

• Game wanted - Simon the Sorceror (suitable for A3010). Any reasonable price paid plus postage costs. Tel: (01353) 861728.

• Wanted: All Archimedes educational software for school. Will pay good price. Send details to Mr Taugh, 20 The Highway, Lewes Road, Brighton, BN2 4GB.

• A3010, 4Mb RAM, 30Mb HD c/w AKF30 monitor. Excellent condition with original packaging, cables, manuals and software. £350. Tel: 0114-236 1307 after 6pm.

• Acorn software for sale: Pipedream 4, £25. Almanac, £25 (organiser, financial package), Startwrite WP, £5, Talkwrite £12, Textease, £8. PC emulator + Dr DOS 5.0, £15. Tel: (01474) 356985.

• Risc PC 600, 13Mb RAM, 210HD, second slice, CD-ROM, 486 card. Bargain at £1499 (new £2150). Tel: (01728) 724522.

• Modem wanted, external 14.4. Also comms and internet software and CD-ROM drive. A3000 for sale. Tel: 0161-950 8409.

• A440/1, ARM3, 4Mb RAM, RISC OS 3.1, VIDC, Eizo 9060S, 47Mb HardDisc, PC Emulator 1.83, Pipedream 4. CC Compression, Fonts etc, £495. Tel: (01257) 424113 (Lancashire).

• A5000, 4Mb RAM, 170Mb HD, Acorn AKF52 monitor, Aleph One 486 PC card with 4Mb RAM & Maths Co-processor, lots of software, £900. Tel: (01780) 63802.

• A3000, RISC OS 3.1, 4Mb RAM, 30Mb Hard Disc, serial interface, Philips colour monitor, monitor stand, all manuals and application discs, some software. VGC, £375. Tel: (01372) 815184 (Surrey) ask for Dave.

• A310 1MB RAM, RISC OS 2, two slot backplane original packing manuals applications disc, VGC, slight use, £65 including postage. Tel: (01706) 817570.

• For sale. Mag CD-ROMs, £2 each inc p&p or 5 CDs for only £8. Phone Matthew on 0973-301 882 (evenings) or 0181-523 8058.

• Most books for BBC Micro; hardware, software, programming, add-ons etc. Excellent condition. Phone (01709) 543745.

• Acorn A3000, 2Mb RAM, fitted video enhancer allows high screen resolution 1024x640. 14in NEC Multisync colour monitor, manuals, £350. Tel: 0181-967 3048 (Middx).

• A5000, 4Mb RAM, 190Mb HD, AKF50 monitor. All manuals and software, little used. £700 ono. Tel: (01582) 867263.

• Risc PC 600, 17in AKF85, 8Mb RAM, 2Mb VRAM, 420 Mb HD, CD-ROM plus manuals - all as new. £1400. Tel: (01746) 765732 (evenings/weekends).

• A3000, including Acorn monitor with 4Mb RAM, 60Mb HD, RISC OS 3.1, games, Pipedream4, PD and magazine discs etc, £400 or offers. Tel: Devon (01548) 843852 (evenings).

• A3000, 4Mb, Phillips colour monitor, Learning Curve, educational and games software. Full set manuals. £425. Tel: (01206) 798122.

• Acorn A5000, 4Mb RAM, 405Mb HD, Multisync, 3.1 Publisher, Genesis Pro, Poster, PC Emulator, 600 fonts, £695. Tel: (01424) 719569.

• For sale: Magazines (AU and Arc World) - '91-'94, £10-15 per year (inc cover discs). Also Almanac £25, Event £10, Deskedit II £10, Arcscan III £7, Pipedream III £20, Easiword £15, Birds of War £15, Black Angel £15, Diskcat £5, Style Guide £5, Assembler Manual £10,. Tel: Mr R Hitch (01623) 751411, evenings only.

• Modem; Miracle WS2000 1200/75, 300/300, auto answer, auto dial, manual control, complete with leads and manual. Ideal starter unit, £35. Various BBC 8-bit programming and reference books, essential for new learner or beginner, telephone for details. Tel: 0191-285 0097 evenings.

• ST506 podule, suitable for A30x0 series etc, for Hard Disc expansion with 'second-layer' (adds to first layer) expansion box hardware for PRES podule box. £25 the lot. Tel: 0191-285 0097 evenings.

• Archimedes A5000, 4Mb DRAM, 258Mb Hard Disc, FPA. As new, still in box. High Resolution colour monitor. £700. Tel: (01223) 862293.

• Acorn software for sale: Impression style, Pipedream 4, games, cover discs, PC emulator, RISC OS 3 user + applications manual. All low prices. Tel: (01252) 515183 after 3pm.

• A3000, external 50Mb HD system £65, EcoSCSI 135Mb HD system £125. Black Angel, Haunted House, Time Machine, Elite, £5 each, Simon the Sorcerer, £15, Home Accounts £25. Tel: (01452) 855136.

• Wanted: Artworks software. Preferably CD-ROM version. Tel: 0181-349 4877.

• Looking to swap Warlocks for Wolfinstein. Other Acorn games for sale or ideally swap. Tel: Philip on Worcester (01886) 832417 after 6pm.

• RiscPC 600, as new, £1000. Prophet II, £80. Eureka, Data Power, Touch Type, Image Outliner, unused, all half price. Tel: Reading (01734) 426843.

• Risc PC 600, 8Mb RAM, 2Mb VRAM, 420 Mb HD, Cumana Dual speed CD-ROM drive, double slice, AKF 60 14in monitor, £1800. Tel: (01705) 588311.

• A3000, RISC OS 3.1, 4Mb RAM, 120Mb HD, b/w Multiscan monitor, Citizen Swift printer, Impression publisher, manuals, £400 ono. Tel: Steve (01332) 760573 (Derby) after 6pm.

• A5000, 8Mb RAM, 425Mb HD, RISC OS 3.1, Taxan 770 + LR Multisync monitor, external 5.25in disc drive. Immaculate, with all manuals etc. £750 ono. Tel: (01924) 255515.

• A3000, 2Mb RAM, RISC OS 2 - boxed as new, includes: 2 x 3.5in FDD, serial upgrade, numerous software/game titles, suitable for IT keystages in schools. £360 ono. Tel: (01932) 562270.

• 2Mb SIMM for Risc PC - £30. 1Mb VRAM - £75, 4Mb SIMM, £100. Contact Oscar Pacey on 0171-582 1084.

• For sale: A3000, 2Mb Phillips colour monitor, 80Mb IDE Hard disc (fitted 1995) serial link, user guide. £190. Tel: (01892) 530071.

• For sale: Acorn computer games. Burn Out (perfect condition) £20 ono. Saloon cars deluxe (perfect condition) £15 ono. (Both £30) Also will swap games for other good games/software. Call Hertfordahire (01438) 718507 any time.

• Risc PC 600, 4Mb, 420 HD, 14in monitor. £1100 as new. A410, 4Mb RAM, 14in monitor, 210 HD, software, £400 ono. Software available. Call 0181-445 3690 or 0956 540055.

• RISC OS 2 programmers reference manuals, £10. Basic WIMP Programming on the Acorn (Book), with software, £5. Tel: (01752) 896077.

• BBC Master 512 board with 1meg RAM, all manuals, plus 30meg winchester with Word5, WordPerfect 4.2, Works2, Lotus123, and about 500 pieces of BBC software. £220. Tel: (01934) 623506.

• A5000 4Mb, 80Mb HD, VGA colour monitor, OS 3.11, PC Emulator, lots of software, all manuals, Learning Curve oack, good condition, Bargain, £450. Tel: Bolton 848495.

• Master 128, Viewsuite ADFS-DFS S/RAM, Cumana 40/80 track, drive 5.25in, cass-leads. £80 or swap for 1-4Mb RAM A3010 or 1-2Mb plus software. Free CuB RGB 14in monitor needs minor repair and desk. Tel: (01204) 571836, Bolton.

• Wanted: Archimedes Operating System book. For sale: Basic WIMP Programming book and disc, £12, and Creator 2 for £20. Tel: (01983) 863293.

• 3 BBC computers, free to a good home, must collect. Tel: Venetia on 0171-730 1652.

• A310, 4Mb RAM, 20Mb HD, RISC OS 3.1, external disc drive interface, video digitiser, external 5.25 FDD, colour monitor, Impression Publisher, £300 plus carriage. Tel: Stephen Harding on (01256) 483454 (office hours).

• Wanted: Books for BBC computer: 'User Guide', 'D.F.S. User Guide', BBC BASIC for Beginners', BBC BASIC Programming for you'. Tel: 0115-922 1456 after 6.30pm.

• Acorn 5000, 80Mb hard drive, 4Mb RAM, MIDI interface, Sibelius6, Impression Publisher, some games (Populous, Simcity, Chess etc) Draw Clipart (12Mb) discs, manuals. £500 ono. Tel: (01245) 252015 (Chelmsford, Essex).

• Acorn A5000, 2Mb RAM, 81Mb HD, 14in VGA monitor, HD disc drive. Lots of software including Advance, 1st Word + Pendown, Arctist, Pandora's Box, Birds of War etc. £520. Tel: (01642) 325598.

• A5000, 4Mb RAM, 80Mb Hard Drive, RISC OS 3, Multisync monitor, 3.5 floppy drive, Impression II, loads of cover dics and PD. £600 ono. Tel: 0181-977 4924.

• For sale: Schema 2, £40, Pipedream, £10, Chocs Away, Chopperforce, Saloon Cars Deluxe, Lemmings 2, Cannon Fodder and Diggers, £12 each. Serpents and Nebulus, £5 each. Tel: (01969) 622634.

• RISC PC 600, 9Mb RAM, 210Mb Hard disc, AKF60, CD-ROM, PC card, Impression Style, SIM City 2000, excellent condition, other software titles, £1100 ono. Tel: (01223) 840633.

• A5000, Maths co-processor, 80Mb HD, Epson 24pin dot matrix printer, Impression, Artworks, some games, utilities etc. £750 ono. Tel: (01734) 730104 (Wokingham) evenings or weekends.

• Software: Magnetoids, £10, Instigator system manager, £10, DR DOS 5 User Guide, £10, Multiple Filer system, £5, Chess 3D, £5, First Impression (A tutorial guide), £10, 3 games, £10. Tel: (01246) 557946.

• Help! Toshiba printer model HX-P550 manual, wish to borrow, purchase, photocopy or locate. Costs reimbursed. Tel: Roger (017683) 72062.

• Technodream + free fancy backdrops to swap for any decent game. Very good condition. Offers to John Bain on (01388) 814522 after 3.30pm on weekdays (Spennymoor Co. Durham).

• Acorn AKF17 monitor. New power supply. Perfect working order. £75. Tel: (01438) 725641.

• Citizen 124D printer, 24 pin, £70. Integrex Colourjet 132 printer, £75. Tel: (01922) 57814.

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Your name:.. Telephone no: ....



More delights from Dave Acton and Dave Lawrence

The bar necessities

Author: Steve Smale

Although we are great exponents of Nick Craig-Wood's desktop organiser *Director*, we are always interested to see other such devices, especially if they do things which *Director* can't (yet)! Steve Smale's *WimpBar* is one such utility, it provides a toolbar which sits across the top of the screen, in much the same way as the icon bar sits across the bottom. In addition to displaying the current time and the amount of free memory (it seems every desktop utility does this!) it provides a set of configurable buttons. These can be set to either execute a set of commands when clicked, or provide a drop-down menu containing many specific commands. A demo configuration is provided, so you can see the type of thing the utility does without having to delve into configuration.

Sooner or later you will want to set the application up for your own use. To do this load the file *Config* (within the application directory) into an editor.

The first line of the config file should be yes or no, and refers to whether the toolbar should be displayed onscreen all the time. If yes, the toolbar will appear at the top of the screen, behind all other windows. Holding the Alt key will bring the bar temporarily to the front of the other windows, and it will return to its old position when you let go. No means the toolbar will not be displayed at all unless you hold the Alt key, when it will be displayed in front of all other windows. Letting go will remove the bar from the screen again.

The definitions for the buttons/icons follow on from this initial line, up to 15 buttons can be defined. Each icon can have a name up to ten characters long, and can either be a Menu icon or an Action icon. A menu icon will, when clicked, open a menu. This menu can have up to 30 options, each having a related * command which will be run if the option is chosen from the menu. An action icon, when clicked, will immediately run a series of * commands. There can be up to 30 commands run from each action icon. Each icon is defined in order from left to right along the bar. If more icons are used than can fit on-screen, the bar will automatically scroll when the pointer comes near to the edge.

Menu icons begin with the line #MENU and are followed by the name of the icon (i.e. what is displayed on the tool bar). Following this, are the menu entry text and star command for each item to appear on the menu. If you wish to include a dotted separating-line under an option, add an underline character '_' to the end of the menu entry.

Action icons should start with #ACTION followed by the name of the icon and then a list of the star commands to be run when the icon is clicked.

Apart from the usual functions, the *WimpBar* menu provides 'Configure' to automatically load the configuration file into an editor and 'Reset' to reload the configuration once changes have been made.

21:14 5,320,704 bytes | Say Hello | Apps | Set Mode

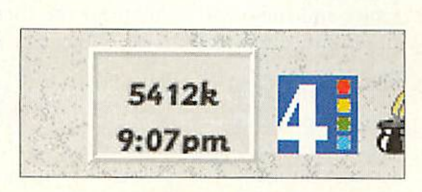
Space time continuum

Author: Robert Casula

From Robert Casula, we have two small modules. The first is an icon bar clock that shows the time and the amount of free memory available. As it is a module task, it is very memory efficient, using only 600 or so bytes.

Robert's second module is called *LineEditor* and replaces the standard cursor and copy key editing system with true line editing and a history buffer. If you're used to the DOSKEY system on a PC, or the type of command line editor implemented under VMS you'll know the score. *LineEditor* intercepts the OS call to read a line of input from the user, so works in task windows, the command line and in Basic. You can use the left and right cursor keys to move within the line you are currently typing and the up and down cursors to recall previous lines.

Obviously it's a matter of what you're used to, some people will prefer the copy system, some a line editor. The latter is definitely handy when you've just spotted a daft typing error right back at the start of the huge line you've just entered.



Peak viewing

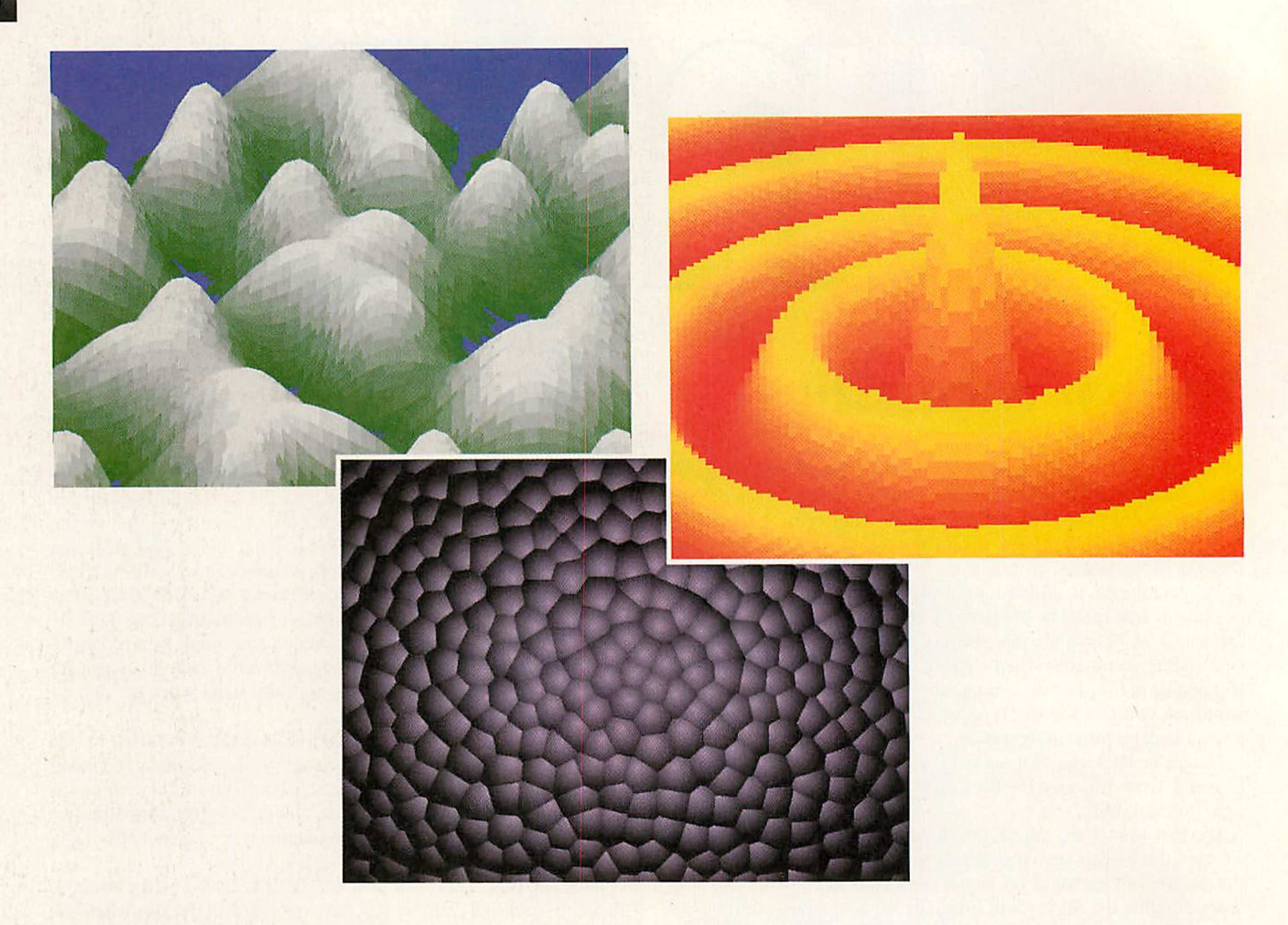
Author: Jan Vibe

The peaks to be viewed are generated by none other than doodle-meister Jan Vibe's latest offerings.

Mountains generates a mountain landscape. *Mountains2* generates an even more convincing mountain landscape. If there were a *Mountains3* it would no doubt be so convincing that you could feel the very alpine breeze blowing alpinely through your curly locks. Sadly, version 3 has yet to be written.

However, Jan's other doodle did get as far as a third version. *Wave* is a one-liner, generating one of those 3D ripply wave-type things we seem to feature from time to time. Not content with the simple splendour of *Wave*, Jan created *Wave2*, on not quite one-line, but filming the progress of the previously static wave. *Wave2* requires a megabyte or so, since it just grabs lots of screens as sprites.

Finally, *Wave3* achieves the same effect as its predecessor but in a much less memory-hungry manner. It does so simply by creating quarter-size sprites and then scaling them up at playback time - what a con eh?



A little extra something from Jan Vibe here with our own enhancement for the lucky Risc PC owners amongst us.

When we first saw *V_Tile* (or 'Voronoi Tile' to give the program its full title) it reminded us of past Vibe masterpieces, namely the likes of *Tentacles* and *Guts*. If you have seen either of these stomach-churning offerings, you will surely remember them.

V_Tile starts like many Vibisms with the statutory sphere generation. The sixteen colour palette is changed to a grey scale and a ball is plotted, with a little random element chucked in for that extra bit of surface texture.

This sphere is then grabbed as a sprite, and the screen is filled with white circles, each placed only where there is still a black pixel on the screen. The co-ordinates of each circle are stored in tables and these will be used for the tiles. This method of picking tile locations ensures that the screen is well covered and the tiles are evenly spaced.

Now, tiles are plotted in sequence. A circle is 'cut out' of the sphere sprite using its mask. Just where the incision is made depends on the position of the tile on the screen and by using different sections of the sphere, the finished pattern can be cleverly highlighted in the middle.

Each tile is plotted in order, the diameter of the plotting circle reduced and the tiles plotted in the same order again. This process is repeated until the circle disappears to nothing. Adjacent tiles effectively fight it out, continually being plotted over each other. The final result is that neat edges are formed between tiles and the finished picture is most frog-spawn-like.

We thought that this little doodle would be a ripe candidate for upgrading to Risc PC level and *V_Tile+* is the imaginatively titled result.

A 256-colour palette mode is used, with the palette set initially to 256 shades of grey. The sphere generation is altered slightly to make use of the wider range of greys and the screen extended to 800 by 600.

At the end you will find the obligatory colour cycling, although we did resist the temptation for violent changes. When you have just 16 colours to choose from, gentle changes of hue are impossible to achieve, but with 256 colours and a subtly shaded picture like this, a slow cycling effect seems to work very well. Well Jan, hope you approve anyway!

Wipeout!

Author: Eddy Oland

Sorry, no state-of-the-art, textured polygon, 3D racing game, but a far more useful disc wiper. Because of the way ADFS works, it can take an inordinately large amount of time to delete all the files on a floppy, especially if they're distributed amongst a number of fiddly directories. There even comes a point when it would be quicker to reformat the disc rather than issue the dreaded *WIPE * command. This is where Eddy Oland's disc wiper comes in handy.

It allows D and E format discs to be wiped quickly and easily. Unfortunately Eddy has not been able to include the code needed to wipe 1.6Mb F format discs. To use, just click on the icon on the icon bar to summon the control window, insert the disc and click on wipe. No confirmation is required, so make sure you haven't left your day's backup in the drive. If successful, the disc will be given a new name as if it had been freshly formatted.

There is only one option available from the menu – the drive number configuration. If you have more than one drive, you can select to wipe drive from the icon bar menu. This selection can be saved permanently if you require.

If anyone would like to update the program to handle other disc formats, we would be very interested to see the results.

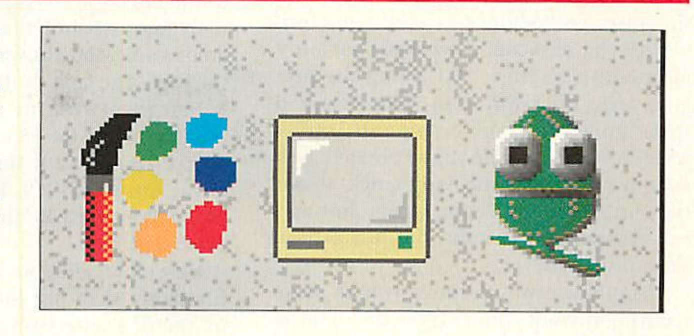
On the blink

Author: Andrew Ayre

Just when you thought there was nothing more that could be done to the poor old Acorn switcher icon, along comes *Blink* by Andrew Ayre of Hull. This little desktop silly is perhaps the nicest we've ever seen. It adheres to the principle that "less is more" and simply adds a pair of eyes to our little green friend in the corner.

Moving the pointer over the acorn induces a confused or even angry expression. Otherwise it will simply blink from time to time. Lack of mouse motion or keypresses will of course lead to the inevitable catnap.

The silly can use low or high-res sprites and swaps between them if necessary.



1-4 for a copy?

Author: Justin Fletcher

One of the most useful features of a multi-tasking desktop environment is the ability to drag and drop data from one application to another. With the steady progress of RISC OS over the years, most applications now comply to the Acorn data transfer protocols and happily communicate with each other. One department that is sadly lacking though, is the ability to move text to and from writable icons. Justin Fletcher has written *TextCopy* to fill this gap. Having loaded the module (double click *!Load*) you should be able to drag to and from writable icons as much as you like.

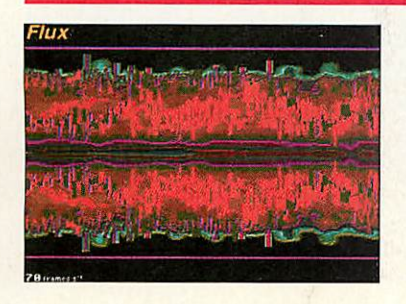
As a trivial example, Justin says try playing about with the Create New Sprite window in Paint, although not particularly useful, you can get to see all of *TextCopy*'s features. Try dragging a (small) text file on to the name icon, or dragging the icon back into a text editor. In addition, you can insert the file name (rather than its contents) by holding down Shift. This mimics most editors ability to do this. If for some reason you do *not* want *TextCopy* to do its thang, drag the icon with Ctrl held down. This temporarily prevents *TextCopy* from intercepting the drag.

Loading *TextCopy* also loads another of Justin's modules *AllWCD*. This is needed because not all writable icons respond in the same way. There are actually two types of writable icons used by the desktop – type 15 ('Writeable') and type 14 ('Write/Click/Drag'). Type 15 is a throwback to the Arthur operating system – all it does is claim the caret and never informs the owning application. Because of this *TextCopy* also never sees the click and so cannot process drags. Type 14, is the all-singing all-dancing button and that does everything *TextCopy* needs. The easiest way round this problem is to install the *AllWCD* module which intercepts the two WIMP calls Wimp_CreateWindow and Wimp_CreateIcon and converts all type 15 buttons into type 14!

If all this wasn't enough, a further feature of *TextCopy* allows you to effectively drag many icons to one destination. Having started dragging one icon, click on a second icon with Adjust, don't release Select though or you'll finish the drag. The text 'sprite' you are dragging will change to a small text sprite whilst you hold down Adjust, this means that the contents of this second icon have been added to the first (separated by a newline). You can continue adding icons to your selection as many times as you like. When you finish the drag, by dropping the textfile icon, the whole selection will be copied to the editor (or whatever). This is particularly useful for transferring names and address from a multi-field address book.

Rowe's column

Author: Barnaby Rowe



Well, Barnaby Rowe's regular bit of this column in fact. You will no doubt have come to know and love the techno throbbings of Mr Rowe's compositions.

Barnaby sent us his usual plethora of tunes, some he tells us written for GCSE (whatever that is) and others for his pleasure, and indeed ours. Disc space limited as always, we picked the best. In his letter he said "I prefer *On The Scene*" and we do too, so here it is.

It is a Digital Symphony file using just four channels and looks splendid played with *Flux* (AU June 1995) which you will no doubt need to hear it if you are not equipped with Digital Symphony itself.

Watch this space for more musical offerings soon, and do send us your own compositions too.

A challenge...

Recently we have been developing a (Basic) program which produced reams and reams of textual output. Initially we were happy just seeing the text on screen, but after a while we wanted to transfer the results to an editor. The options were:

1. Change the code to output all text to a file (with BPUT etc. instead of print)
2. *SPOOL the output to a file.
3. Use the CLI's rather bizarre redirection operators { > file }.
4. Use a taskwindow.

Of these, 1 would have involved a fair amount of work and was not a particularly satisfying solution. 2 was messy – the results would still be printed on screen and therefore could not easily be run from within the desktop. 3 worked, but only outside the desktop – *RUNning the program with the redirection characters had to be done from the command line. 4 worked in the desktop. Unfortunately task windows are not particularly quick, so our poor little prog was taking an absolute age, not generating its results, but just getting them displayed!

The problem was to find a way to make redirection work from within the desktop and then simply send the resulting file to an editor. We decided the most useful way to do this would be by adding an option to *Director's* 'MenuMenu' (accessed by pressing Menu on the File '<name>' option on the filer menu, or by Select-Menu-clicking on the title bar of Zap). Initial tests were conducted with an aliased command for speed though. Our first thought was:

```
*Set Alias$Redirect Run %*0 { >
|<Wimp$Scrap> }|MFiler_Run
|<Wimp$Scrap>
```

The |'s were needed to stop Wimp$Scrap being GStrans'ed immediately. The problem is that the CLI spots those {s and tries to do the redirection there and then! Escaping them with vertical bars is interesting - it turns them into square brackets. The first challenge is:

"How do you put { and } into an aliased command?"

In fact, it's not that hard and if you don't know, the answer's at the bottom of the page. The next stumbling block though is that even with the correct brackets in the line, when the CLI comes to parse the aliased command it throws away the rest of the line after the }. This means that the redirection must be the last thing in the command.

Here's our solution: If you Filer_Run a file rather than just Run it, it will be run by the *filer*, effectively queuing the command. We therefore tried swapping the two components of the alias around:

```
*Set Alias$Redirect Filer_Run
|<Wimp$Scrap>|MRun %*0 { >
|<Wimp$Scrap }
```

Unfortunately, <Wimp$Scrap> must exist, or the Filer_Run errors out with *File not found* straight away. Instead, we created another obey file (called *EdScrap*) containing the single line:

```
Filer_Run <Wimp$Scrap>
```

and setting our alias to:

```
*Set Alias$Redirect Filer_Run
EdScrap|MRun %*0 { > |<Wimp$Scrap> }
```

This queues the running of *EdScrap* (and hence the loading of <Wimp$Scrap> into an editor) until after the Basic prog has been run and redirected. With the alias command working, it was trivial to insert this command into *Director's* MenuMenu as an extra option under 'Filer_Boot'. With everything in place a couple of mouse clicks will run any prog and send the results to an editor 'instantly'. The second challenge though is:

'Can anyone think of a neater way of doing this?'

Answers:

1) How to put { and } into an alias: Read the manual section on GSTRANS - any ASCII code can be inserted by enclosing the value in < and >. The redirection sequence is therefore:

```
<123> > |<Wimp$Scrap> <125>
```

2) Any ideas let us know!

Away match

Author: David Waring

Matches is a two player desktop game. Each player, in turn, takes as many matches as they wish from one of the rows. The object of the game is to force your opponent to remove the last match. You can play against another person, or the computer, and can decide which player goes first. The author, David Waring warns: 'If you let the computer go first, it is virtually impossible to beat! It's pretty difficult to beat even if it goes second.'

Matches is actually the first in a series of desktop games we will be publishing over the coming months. For some reason, maybe the position of Jupiter or something, has meant that practically every other submission we've received over the last month or so has been a desktop game! This is no bad thing as they're all rather fun to play in a dull moment. Expect to see such wonders as *Nine Man's Morris*, *Clump* and even the revival of *Hneftafl* over the next few issues. We'd like to perpetuate this series, so if you've knocked up a version of 'the L-game' or maybe revamped *info's own Chinese Chequers, please send them in to the usual address. The provision of a computer player will naturally win more brownie points. Perhaps if we receive a number of versions of the same game we'll set up a tournament . . .



All programs, hints, tips and what have you to the usual address please, viz:

*INFO, *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP

or, if your submission is 100K or less e-mail us (including your real address please) at:

austarinfo@idg.demon.co.uk

We know that most of you hate using paper, so don't worry about including a letter – just put your name, address and program title on every disc and include a text file containing your name, address, disc contents and program details. An SAE will ensure your discs are returned and usually a quicker response.

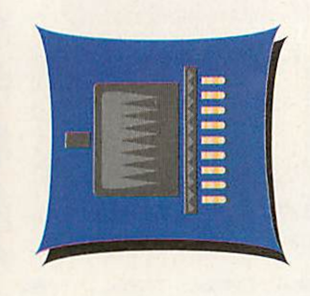
Compatibility table

Program	RISC OS 2	RISC OS 3.1	RISC OS 3.5+
Blink	No	Yes	Yes
Free Clock	Yes	Yes	Yes
Line Editor	Yes	Yes	Yes
Text copy	No	Yes	Yes
Wiper	Yes	Yes	Yes
Wimp Bar	No	Yes	Yes
Vibes (all)	Yes*	Yes*	Yes
Matches	Yes	Yes	Yes

Except V_tile+

Mike Cook's hardware series

Run the



There are many inspirations for my projects, but this one started from simple envy. While walking through Bolton Market I came across one of those fancy electrical stalls – you know the type, lava lamps and table top wave machines. In one cabinet was what looked like a rotating ball of coloured LEDs flashing different dotted patterns. I wanted one. I also did not want to pay the £80 they were asking. So I thought I would design an even better one.

The principle is very simple – just spin some LEDs round very fast and flash them on and off. The persistence of vision of your eyes makes it look as if you have streaks of light. If you control the flashing accurately enough you can make the patterns repeat. In a way this is similar to my old Magic Wand project from the July 1989 *Micro User*, but this time there is much more flexibility.

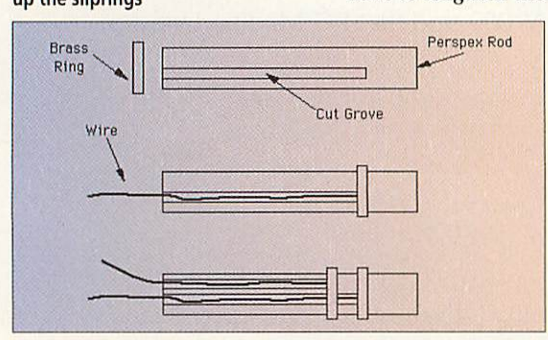
Now one problem with spinning LEDs is that you tend to get the wires a bit tangled up. I did consider several options but in the end came down on using simple slip rings for each LED. I was initially a little apprehensive at my mechanical construction ability but in the end it proved to be simpler than I thought.

The first stop was to the local model shop where I found a perspex rod and brass tube that fitted neatly together. Then I purchased a miniature tube cutter and cut small pieces off the brass rod. At first I tried to cut as small a ring as I could but found that this was too small and settled for rings of about 6mm thickness.

Next a 7cm length of rod was cut off and a groove cut down most of its length. I did this with a miniature grinding stone that came with my miniature electric drill. It was not perfectly straight but then it didn't have to be. It needs to be deep enough to accommodate a thin insulated wire and still be able to slip the brass ring over the top.

Then, before pushing the ring on to the rod, I soldered the wire to the inside of the ring. You have to be careful not to make the blob of solder too big otherwise the ring won't slip over the rod. When it is in place a small spot of super-glue will secure it. Make sure the wire is long enough to reach your LEDs otherwise, like me, you will have to lengthen them which is a bit messy.

Figure 1: Building up the sliprings



Having slipped the first ring in place as shown in Figure 1, you need to cut a groove for the second. Naturally this is not as long as the first and I placed it on the opposite side of the rod. In all you need nine rings, one for each LED and one for the supply. Make sure you leave some space at each end of the perspex to connect the motor and the whizzer arms mechanically.

My next problem was that I couldn't decide whether to have an LED ball, like I saw on the market, or close-packed LEDs that I could view vertically so I could put patterns and even writing on them. In the end I compromised, and had both.

The next problem was the LED supports – I used the plastic cut from the walls of an IC tube. This was thin, strong and, most important of all, flexible. After all if you are going to whiz something round at high speed, the last thing you want to do is some damage, either to yourself or the machine when you accidental brush against it.

And you will. I cut two slots in the end of the tube with a saw and looped the plastic strip over to form an inverted drop shape. I widened one slot and put a straight piece of plastic in this, ending up with the shapes you see in the photograph. The whole thing was secured with a little silicon rubber adhesive.

Next came the task of fitting the LEDs on to the plastic strip. I used miniature 3mm low current clear LEDs, red for the close packed cross beam and a variety of colours for the loop. I allowed myself the luxury of using two blue LEDs which are about eight times as expensive as the red ones, along with two red, two green and two yellow. The clear package makes a much sharper point of light than the diffused coloured packing.

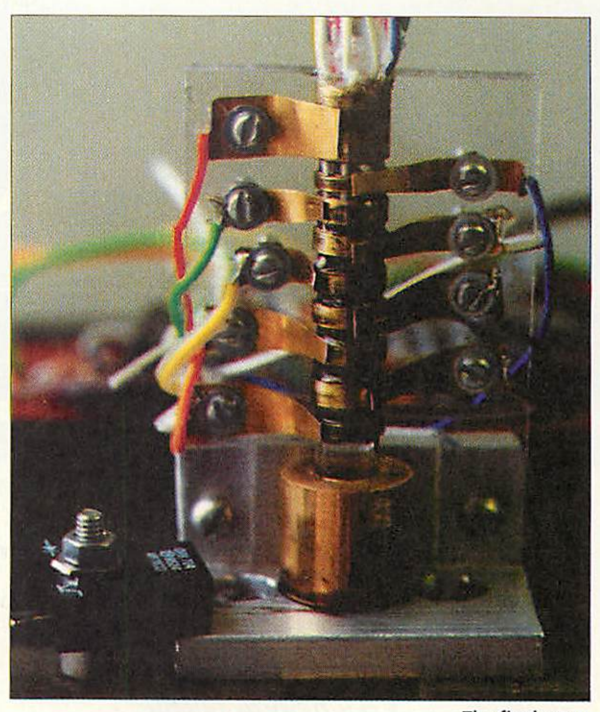
I put the coloured LEDs on the loop, by drilling 0.8mm holes 2.5mm apart and slotting the LEDs into them. I made sure that they were pointing horizontally, this meant that sometimes they were at an angle to the loop. Then each one was fixed in place using IPA adhesive. This was a long job because I had to do them one at a time as I had to clamp the loop at an angle to get them pointing horizontally.

Make sure you clip the leads of the LEDs to about 5mm before gluing them in place. Note that in an unclipped LED the anode, the positive connection, has the longer lead – make sure you preserve this when shortening them.

The red LEDs on the cross beam required a different technique. These straddled the plastic and are held in place using glue only. As all the anodes needed to be joined I bent the leads at right angles and soldered them together to form a firm foundation. When I tested the lights I found that the light from one LED would get into the lens of the one next to it and cause that to glow as well. Therefore, I very carefully painted the body of the LED with black enamel paint, just leaving the top of the lens clear. This meant when you looked down on them they sparkled like individual bright red stars.

Mike Cook starts to build a whizzy LED thingy

RISC



The final setup

The LEDs have to be wired up to the slip rings, the anodes of the cross beam wired up to the supply slip ring and their cathodes to the anodes of those on the loop. The cathodes of the loop LEDs are then wired up to the slip rings. Make sure that LED closest to the spindle on the cross beam is wired to the LED at the top of the loop, and so on. This is so that any pattern you program will have the same spatial relationship in both the horizontal and vertical direction. As long as you keep this order it does not matter which slip ring you use.

Now I mounted the slip rings on to the motor by making a small brass shaft coupler and used an L shaped bracket to mount a 7cm piece of perspex close to the shaft. On this I put the spring contacts that brush against the slip rings. I used thick brass foil, or thin brass sheet for this, carefully cutting out a 2cm finger, with a pair of sharp tin snips, and then drilling a 1.2mm hole in the end.

They need to be shaped so that they are narrower at the end that makes contact with the ring. This is to prevent them touching adjacent rings. The perspex was drilled in situ and the slip ring contacts fastened up using the smallest bolts I could find, that is M2 size. You can see the final arrangement on the close up photograph.

After mounting each slip ring contact I tested that both lights were working. I did have a bit of trouble with the super-glue seeping on to part of the rings and forming a transparent insulating layer. This necessitated my scraping it off with a sharp knife while examining it with a magnifying glass.

At this stage I could test the arrangement by wiring the LEDs temporarily to a resistor each and spinning the motor. I could see clearly that the idea was going to work but a few LEDs showed black gaps in the circle of light.

This was a perfect diagnostic test as it showed the exact position on the slip rings where contact was not being made. A little contact bending and slip ring scraping cured the problem. The system made somewhat of a squeaking noise, so I applied a small drop of electrolube to each slip ring. This is a lubricant especially made for electrical contacts and it worked a treat.

At this stage I should perhaps say a little bit about the motor. I found one in a junk box with an integrated gear box. It was a 24 volt motor and produced about 1,000 RPM at full speed. I drove the motor from a variable bench supply, in this way I could easily alter the speed. The faster the motor the better the display so anything between 500 and 1,000 RPM should be fine. However, the faster the motor, the more wear is put on the moving components, so don't be too keen to use a really fast one.

Now to prepare the LEDs to be driven from the computer's printer port. I probably could have just got away with driving them directly from the port but I didn't want to risk any overload of the power dissipation limits of the port. So instead I used two open collector hex inverters. These would more than adequately drive the load, this is shown in Figure 2. As the coloured LEDs are a little less bright than the others I had to put slightly different values of resistors in series so that the cross beam red LEDs were all the same brightness.

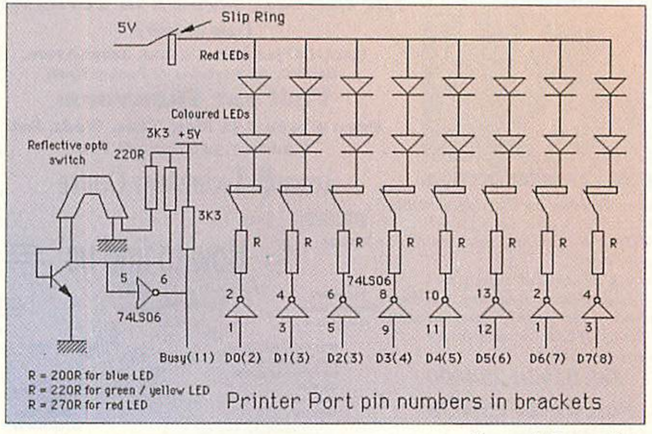


Figure 2: Preventing overloading the printer port

Finally I mounted and wired up a reflective opto-switch, this was so that the computer could detect the start of each revolution to synchronise its pattern, so that it appeared stationary. This was fixed so it pointed at the brass shaft coupler, which had a small square of black paint on it.

Normally the infrared light reflected from the brass giving a logic zero but when the painted area rotates into view you get a short logic one blip. I could have done the detection of the rotation with another slip ring that had a spot of insulating super glue on it, but I wanted to keep the number of slip rings to a minimum and besides, I didn't think of it in time. The shaft rotational detector part of this system is optional and you can do quite a lot without it.

Well now we have the hardware, how do we drive it and what sort of results does it produce? I'm afraid you will have to wait until next month to see when once again I will Run The Risc. AU

ACORN USER guide to local dealers

SURREY

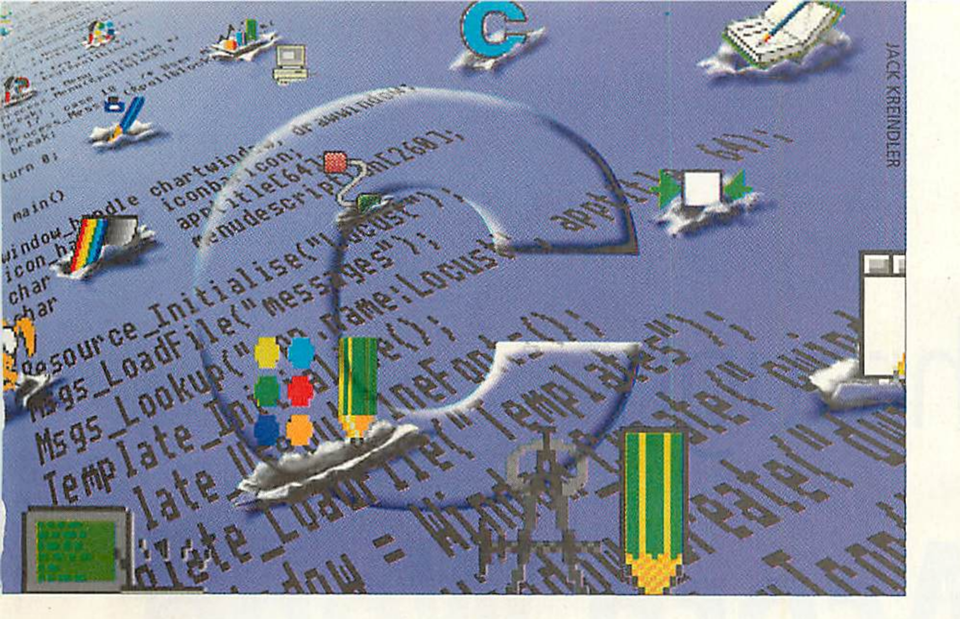
DERBYSHIRE

WEST YORKSHIRE

WEST MIDLANDS

MIDLANDS AND OXFORD

CUMBRIA



C for yourself

Steve Mumford tackles window creation in this month's tutorial

At the end of last month's endeavours, we'd written a program that sat on the icon bar and produced error boxes whenever the user had the temerity to click on it. This time around, I've included functions that load a template file from the application directory and create a window, complete with icons. I've added handlers for some more events and messages which allow the window to be moved about, resized, closed and opened – as well as change the text in one of its icons.

The first step in adding windows to your application is the design of the windows themselves. They're described by complicated blocks of data which cover everything from their appearance to their contents. It's possible to do this in a rather abstract manner from within the code by filling in the data block by hand, but most people find it easier to use Acorn's *FormEd* application or something similar to build a window description in a more intuitive WYSIWYG environment. It's also a lot easier to alter the layout of your windows once you've finished; because they're saved as a separate file, you don't need to re-compile the main program.

Once you have a template file that meets your requirements, the next stage is to import the information from it at an appropriate point during the initialisation of the program. This is achieved using three SWI commands, namely **Wimp_OpenTemplate, Wimp_LoadTemplate** and **Wimp_CloseTemplate**. The first and the last of these prepare the computer for reading a file and tidy up afterwards respectively – **Wimp_OpenTemplate** takes a pointer to the filename in R1, and **Wimp_CloseTemplate** takes no parameters.

In order to load a template, the user must provide two buffers, large enough to hold all the window and icon data. It's possible to determine the exact size required with a preliminary call, but in this simple example I've taken the easy way out and assigned an ample amount of memory. **Wimp_LoadTemplate** takes values in registers 1 to 6 – the first three give the addresses of the template buffer, the workspace area and a pointer to the end of the workspace. The fifth register holds a pointer to a 12-byte name of one of the templates in the file; this name must start at a word-aligned address in memory.

In the example on the cover disc, only one window definition is loaded – if you're loading more than one, you'll either have to create multiple buffers or keep track of the individual windows in one large buffer. Finally, **Wimp_CloseTemplate** is used to let the program know that the template file is no longer required.

To create the window, the address of the template buffer is copied into R1, and **Wimp_CreateWindow** returns with the window's handle in R0. This is used to refer to the window throughout the rest of the program, so I've stored it in a global variable. So far, the window hasn't been displayed and it will only appear on the screen when the WIMP is instructed to do so. Its size and position are copied from its data block and passed to **Wimp_OpenWindow**, and the window is finally pasted on the desktop in all its glory.

The story isn't over yet – we have to add the appropriate event handlers to allow us to resize, move and close the window. The WIMP lets us know when one of these occurs by passing our application an event code of 2 or 3, **Open_Window_Request** or **Close_Window_Request** respectively. Luckily, these are simple to deal with as most of the updated information is given to us in a ready-to-use format, so we can just call the appropriate SWI immediately.

Finally, the application listens out for the *TaskInitialise* message, broadcast when a new task is installing itself on the desktop. When one occurs, the task's name is copied into a display icon in the window before it is redrawn. The upshot of this is that our program is now a limited WIMP watchdog; try leaving it running in the background whilst you work in the desktop – you might be surprised at some of the programs that execute without your knowledge. Next month I'll investigate the methods of creating and maintaining menus, and I'll begin looking at better ways of organising all the data we have to handle. AU



Rambles through Acorn Wood

Mike Cook reviews more hardware aspects of Acorn machines

Well, it's been a busy month for me at work – all my undergraduate exams have to be set for the summer and although that might not seem too far away when you read this, I am battling with snow while I write it.

Therefore there has not been too much time for matters computing, although I have been monitoring the latest results from the Galileo probe and the Hubble space telescope on the Internet. No progress on last month's problem with the MIDI and the PC card, but I have had many more letters and e-mails, so let's get on with the problems.

Richard Walker of Cleveland (via the Internet) informs us:

Regarding David Wilson's question in the January issue of *Acorn User*, it is indeed possible to connect an IDE CD-ROM externally. I myself made up an external hard disc system for a friend's A3000 from an HCCS IDE card, 24in ribbon cable, 500Mb 3.5in IDE drive and an old FileStore case.

This works fine; it's just a little large and has to be right next to the computer. For a CD-ROM, I would get hold of an external case (5.25in with a PSU) and fit an IDE (ATAPI compatible) CD-ROM drive, joined to the Acorn IDE bus inside the A5000. Choose a type of case that can go right next to or on top of the computer. I think EESOX sell the driver on disc for pre-RISC OS 3.60 computers for about £25.

Also, in a different letter, you say: *PC scanners won't work with Acorn's*. This is not true. If you buy a scanner which is parallel/SCSI/TWAIN compatible and Acorn TWAIN drivers exist for it (check with David Pilling) then it will work. Buy *ImageMaster* or *PhotoDesk II* for manipulation or scanning. This is, of course, only for flatbed scanners, not hand scanners.

Chris Jones from South Wirral writes:

I have been reading your articles in *Acorn User* and I am hoping you may be able to help me. I have been programming Acorn computers for eight or nine years, starting with an Electron and for the last five or six with an A3000.

I am also a keen musician and have played the guitar for seven years. I have over the last three years been getting into electronic music and using MIDI. Between myself and one of my friends we have a fair bit of equipment (a four track, a few modules and effects units, and a PC).

We also have a few old mono synths which is where the help is needed. What I want to do is convert my A3000 into a controller for the mono synths. Rather than just simply to trigger notes and have different voices I want to have riffs which can be triggered. These riffs can be synchronised using MIDI time code, so there can be a lot more control over the synth, and more varied and interesting sounds produced.

You can get these old synths retrofitted to receive MIDI but it isn't very flexible. Usually you have note On, note Off, pitch bend, and maybe filter control. I want to be able to control all the switches and potentiometers from the computer to give complete control, ease of use, and setup.

I have no trouble in using machine code and have been using it since I was 13, so programming wise there are no problems. What I need is some information on using the 8-bit user port. I have been trying to find some books on using the user port without much success.

Can you recommend any books on basic electronic projects for the user port which may help me? I have a very basic understanding of electronics (what I did in A-Level Physics) but I have a friend who could help me. I need to get:

- 16 control voltages per synth — to control the potentiometers
- 16 switches per synth for, say, eight different synths, and to be able to set all of these about 64 to 256 times per second.

Do you think this is possible? I have already written a lot of the code for it but I need to get the hardware sorted out to get any further. So have you any suggestions, books or have you done any projects in past articles which may be of use to me?

Well, I was going along with you until you sprung that last one, 128 control voltages and 128 switches at 256 times a second all from one 8-bit port. That means you have 15.2uS to control each one, and synchronise it to MIDI — in a word, no.

I mean the ARM chip is good but not that good. Let's lower your sights and see what can be done. It is quite possible to control one synth with your computer providing you don't want to do much else with it.

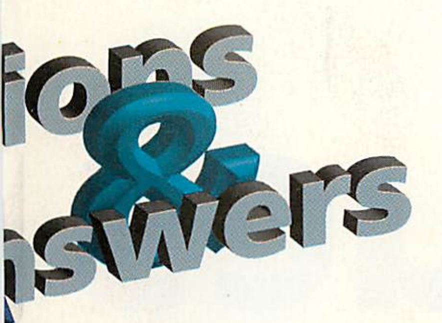
Now I am a bit surprised that you don't know how to use an 8-bit port – most of my projects connect to them. What you need to do is to study the first *Acorn User* Run The Risc articles in May 95 that told you all about using the printer port.

However, you now want to control your synths switches and all a computer will do is to provide a logic signal. While this can be like a switch it is not always the function a switch serves. For example a switch can supply power and remove it, just like a logic output.

But on the other hand a switch can connect an audio signal to a filter input; that's not like the logic output produced by the computer. To do this what you need is called an analogue switch. This has a logic control voltage applied to it and two lines into the chip go a very low resistance.

Remove the voltage and the lines go high resistance. This is like a switch, providing your signals are within the power rails of the chip. One such chip you could try is the 74HC4066, although the signals you do switch have to be between zero and five volts. If you find your synth signals being larger you have to go to a more complex arrangement.

The same goes for the pots. A pot can simply provide a voltage, just like a D/A (digital to analogue) converter, however it can act to tap off a certain proportion of a signal like a volume control. Just like the switch, one is quite easy to do and the other is difficult. If you want voltages the TDA8444 chip gives you eight D/As in one package, however, it fits on the I2C bus. This was featured in my December 95 article.



If you need the other sort of control you can get digital-controlled potentiometer chips – for example the X9312WP. Inevitably there is a price and these chips can be about £5 each, so for 16 you need £80 before you start on anything else.

So you can see the cost of converting all these synths would probably buy you a top-quality MIDI sound module. Like most things electronically, it can be done but is it worth the price and effort? However if you take it slowly and don't aim too high you will probably learn a lot. Unfortunately I don't know of any books that might help you on this specific project. The best I can suggest is that you keep on reading my articles.

Now a short one from Mr. I J Cleaver from the West Midlands:

I own a Risc PC600 with an internal CD ROM drive (Acorn) which I brought with the machine. I want to fit a second hard drive does it have to be a SCSI drive or can I fit another IDE drive. Also will I need a second slice to my machine?

You can only put two devices on an IDE interface, and as you have a hard disc and a CD drive you are full, so your best bet is to use a SCSI interface. You can get a second IDE interface but I have heard that there are some software snags about recognising the second interface. If you do fit a second IDE interface podule you will need to add a second slice, but with a SCSI you can add external devices and so there is no need to grow vertically.

Tony Frankl from London writes:

I still have one of your Fast A/D converter cards for a BBC Micro user port published in *The Micro User* of February 1987. I have recently been trying to get it to work on my A5000 with a user port podule.

When I run your original program under 65Host it is about a hundredth of the speed of the BBC B. Translating your program for running on in BASIC 5 produced little improvement. I suppose that OS_Bytes 150 and 151 must be no faster than direct memory access on the BBC B.

If you have a solution to the problem of fast access to external hardware perhaps this could make another AU article?

The problem here is that the old BBC computer was very efficient at talking to interfacing chips. You could just poke in straight from Basic or go into machine code, disable the interrupts and have the computer just execute your code.

Now with the ARM chip you have to slow it down to talk to the interface chip, so that part is running at the same speed. Also you can't simply poke numbers from Basic as area of memory the interface chips occupy is protected.

Therefore you have a limited choice. You can go through the OS_Byte calls, but as you have found this is slow. You can get a speed increase if you use the Podule_RawRead calls as illustrated in the Christmas 95 *Acorn User* Run the Risc article.

Finally, for the ultimate speed up, you can do the whole thing in machine code by first entering the Supervisor mode. I have showed how to do this in several articles. The one that springs to mind is the August 93 Body Build article in *Acorn Computing*. This was about a linear CCD sensor and you need fast access to drive it.

So the major slow down with Risc machines is the jumping in and out of Basic, but there is also another problem. You can't entirely have the machine to yourself. That is interrupts and cycle stealing for the sound and video make it impossible to output a steady regular signal with software, as you could with the early machines. Therefore the strategy of some projects has to be changed to achieve the same results. It is these techniques I have, and will, cover in the Run the Risc articles.

Paul Roegele from Norfolk writes:

I have recently been looking through the December 1991 issue of *The Micro User* and I found one of your articles about building a sound sampler that uses the printer port. I would like to build this unit, but I do not know whether or not it would work with my computer.

I have an A3000 with 2Mb RAM, RISC OS 3.10 and nothing else. Will this unit work with RISC OS 3.10 and with a unidirectional printer port? Also, how can I get a copy of the sampler software?

Also, I have tried your latest project — connecting a Sega Mega Drive pad to the computer using the printer port — but I could not get any response when I pressed the keys on the pad. I loaded in the Bi_Directional module and the module on the cover disc but when using the monitor program supplied, I could get no result from pressing the keys. Do you have any idea what is wrong.

I think you have misunderstood what the Bi_Directional module does. It will not magically make a single direction printer port into a bidirectional one. What it does is to drive the hardware described in the September *Acorn User* to make that look like a bidirectional port. Therefore to use a Sega game pad with your computer you need that extra hardware.

The sound sampler on the other hand was designed to be used with a single direction printer port and will work on your machine. The software was on the cover CD of the April 95 *Acorn User*. You can get it off the Internet or I can send you a disc for £1 to cover postage and handling. I also have a few PCBs left so you could get one of those from me for £5. Finally you might have trouble getting hold of the A/D chip. Again I can supply this for £6. I hope this has been of some help.

Finally Brian Yewdall from West Yorkshire writes:

As a new subscriber I am still finding my feet around RISC OS. My problem is a cost effective way of backing up my hard drive (420 Mb IDE) fitted into a 440/1 with RISC OS 3.11 with 8Mb of RAM. At present the low density floppy drive is awaiting replacement by a high density version (Beebug) but this to me still seems a pain (back up 200Mb at present). For reasons of cost I have discounted buying the existing 2 and 4Gb tape streamers I have seen advertised.

One option could be the new removable Zip drives currently being advertised in the Mac mags. These are about £150 and you would need a SCSI card. The replaceable cartridges cost about £15 and hold 100Mb.

Also, at about the same price is the SyQuest 135Mb cartridge. However, think. Do you really need to back up all your disc? Much of this will be applications supplied to you on floppy so you already have a back up of those.

Therefore all you need is a backup of the work you create. I have found a good strategy is to use the hard drive for all my applications and then hold my work on floppies. With the correct directory structure for your way of working, you should only need to make a copy of the documents you have changed that day. In that way there is no need for massive back-up sessions which quickly lose their novelty. AU

Back issues

Missed out on one of our previous issues? Now's your chance to bring your collection up to date, but hurry: stocks are limited.

Issue 156 – June 1995
● TJ Reproductions ● How the Acorn User CD-ROM was cut ● PC card lab test ● 16-bit Risc PC sound card ● Cumana SCSI 2 card

Issue 157 – July 1995
● Details of the StronARM deal ● MacroLife ● Prophet 2 reviewed ● How the Black Country Kodak CD was produced ● Mark Smith interview

Issue 158 – August 1995
● Elite on the cover disc ● Techniquest report ● Ovation Pro preview ● How a shool won with Acorns ● Acorn's C/C++ compiler ● Animation software reviewed

Issue 159 – September 1995
● The A7000 and new Risc PCs ● Taos ● How Elite was written ● Hard disc backup on the cover disc

Issue 160 – October 1995
● The Acorn User WWW site ● Director ● Fire and Ice ● Compo ● Acorn's education agents scheme

Issue 161 – November 1995
● Acorn User awards ● CD-ROM roundup ● Graphic design ● Crystal Rainforest 2 demo

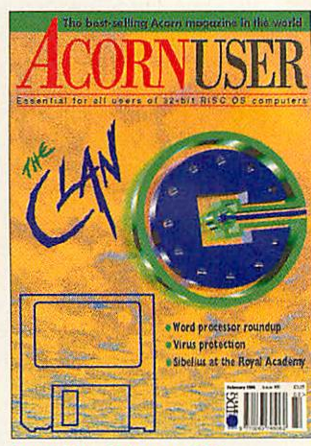
Issue 162 – December 1995
● Cambridge Om trial ● Internet package ● Acorn's new divisions ● Software for dyslexics ● Skillsware



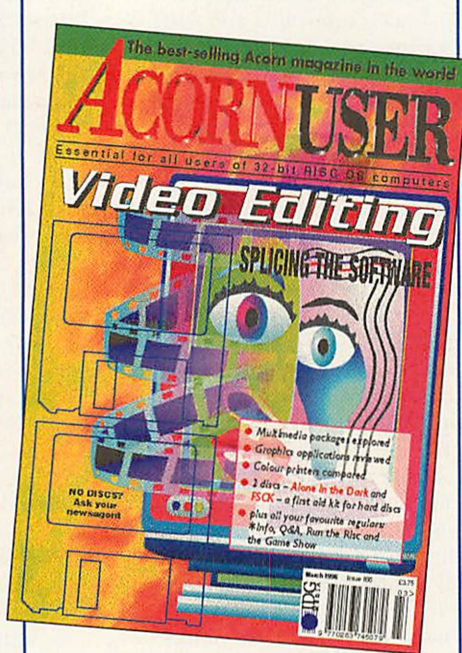
Issue 163 – Christmas 1995
● Unusual gifts for Christmas ● PD round-up ● Alone in the Dark ● Global Effect demo ● Online Media Technology



Issue 164 – January 1996
● Hybrid machines ● Travelling with a Pocket book ● Virtual design ● Acorn Educational Products & services Catalogue ● Top Model demo



Issue 165 – February 1996
● Word processing round-up ● The Clan ● Virus protection ● Sibelius at the Royal Academy ● Resource editor demo



Issue 166 – March 1996
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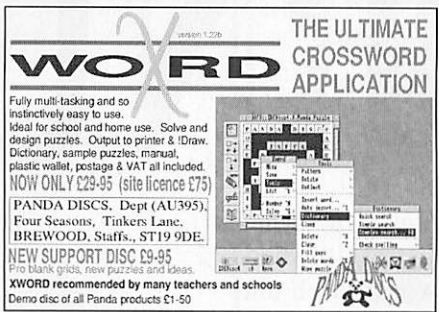
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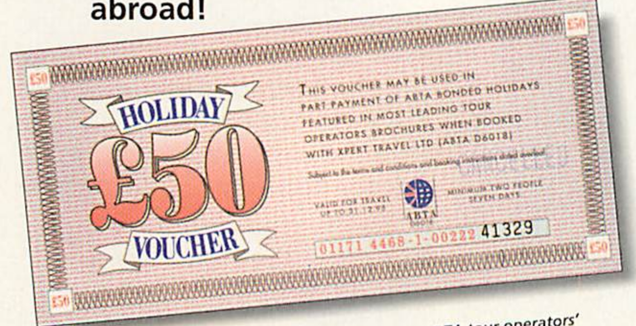
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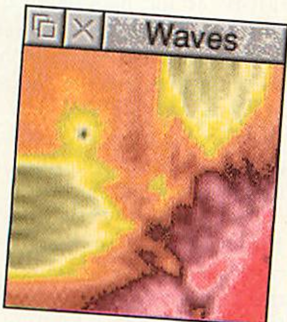
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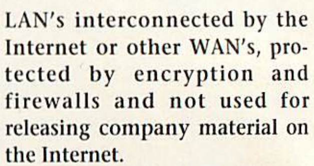
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Letters



A new look for AU?

I recently took the latest copy of AU up to the cafe, to peruse it while eating my lunch. I placed it on my tray, along with the food I was going to buy, and promptly spilt an entire cup of hot chocolate all over it. 'Darn!' I exclaimed — well, maybe not exactly *darn* — as I began mopping up.

I paid for the food and sat down to a rather soggy magazine. After spending 10 minutes separating the pages (compare and contrast York University Hot Chocolate and Loctite Superglue), I noticed that the entire magazine now had a rather attractive beige border on every page. It looked almost like it was supposed to be there (apart from being slightly sticky and smelling of chocolate).

I was going to send you one of the pages, but it seems that MIME doesn't seem to support a Content-Type of *torn-off-bit-of-paper*. Anyway, try it yourself – I'm sure if you were to include the border on subsequent issues, sales would increase dramatically. Of course, you could probably scan one and then print it on to the others, rather than having to dip each copy in hot chocolate. In the light of my revenue-increasing suggestion, could you please send me a free Risc PC? Oh OK – how about a mouse mat then?

Dave (davidl@minster .york.ac.uk)

How about the silliest letter of the month award? An empty polystyrene cup that once contained hot chocolate.

Irlam ColourMobile scanner

With regards to the review of Irlam Instruments' ColourMobile in the March edition of *Acorn User*, we would like to raise a few points:

Poor colour definition was probably the result of failing to allow the scanner to warm up enough. The latest version of the software (v1.30) automatically waits for the scanner to warm-up.

Existing owners can upgrade (free of charge) by returning their original disc with a stamped addressed envelope.

The software does stream scanned data directly to the hard disk. A 24-bit scan of a 6in x 4in photographic print at 400dpi requires well over 14Mb — little wonder that a 9Mb Risc PC could not cope with this. The same scan at a modest 100dpi would require under 1Mb.

An image-stitching package is available, to allow the user to scan images which are wider than the scanner itself. The package costs £25 + VAT, and includes a A4 size trackpad to ensure straight scans.

Chris Searle,
Irlam Instruments Ltd

A change of direction?

I hope that *Acorn User* will soon return to having a more optimistic outlook on the Acorn computing range, rather than the pessimistic outlook both some of your readers and the magazine seen to hold about the future for Acorn, RISC OS etc, of which I have become tired. I would much prefer the focus on the positive aspects of the Acorn market, its new found potential, and recognition that computing in general is undergoing fundamental change which can be exploited.

I am a database developer in a small IT department, using Oracle Designer 2000 toolset, in a company with a turn-over of about £40M. I read weekly computer newspapers and try to keep myself informed about the future of business computing. I use a 486DX2 66MHz with 40Mb RAM and a 1Gb hard disc to fulfil my job function and with such a machine, who would expect to have memory problems from applications, but I do.

I frequently re-boot the PC simply to clear DOS memory and start again, and don't you just love those windows *General Protection Faults* that discard all your work, just as you're doing something complicated like moving a frame, or saving your file in MS Word.

Of course the CPU is now a bit slow at screen handling, but we can't change that, as the manufacturers (Olivetti) haven't made a suitable Pentium card. This, I believe, is the common reality of the PC World, the software continually outstrips the chip technology and one had to forever upgrade to run the latest software.

The deal struck with Oracle should impact the corporate database functionality for the following reason: Historically databases have used Unix servers with a large number of text mode terminals (VT100, and so on) as the user interface.

With the advent of Windows on the PC there has been a migration to the world of GUI interfaces for database users, which has resulted in a serious drop in the stability of the terminal — this is a view generally accepted in the industry. Also PCs still fail to deliver much of the functionality that GUI's are supposed to provide unless top of the range equipment is used.

Oracle are attempting to move databases back to a more stable and flexible mode of use.

Our database PC's at work are 100MHz DX4 with 16Mb RAM and this is the recommended *minimum* configuration to successfully run Oracle Forms and Reports, and we still run out of memory as some reports compile, leading to reboots. By offering low-cost 32-bit RISC OS – TCP/IP terminals, Oracle can now offer a simple reliable device, that provides a windows environment that can be used in a LAN (local area network) directly, or via the Internet, on a WAN (wide area network) and that will deliver rapid screen response to put information, images or video on display.

The Java language offered by Sun Microsystems releases users from single Operating System dependence and applications are now available to cover most common requirements such as WP and Spreadsheets.

When used in a corporate LAN environment, the network response is fast enough to support server-based applications (the applications are stored on a central computer not on the individual machines) and the inclusion of video in MPEG should be practicable with StrongArm CPU's.

The impact of World Wide Web browsers in the domestic market is generally over-hyped, more realistically, in the USA about 60% of WWW development is for internal use by corporations across LAN's and LAN's interconnected by the Internet or other WAN's, protected by encryption and firewalls and not used for releasing company material on the Internet.

This is the so-called Intranet, which has remained free from media hype, this is where global computing will go and in significant numbers. The impact of Oracle offering a terminal that out-performs a PC in many important ways, that's cheaper and more mobile, will have significant repercussions on the sales of Acorn equipment, far more reaching than is suggested by the Acorn press.

It's a common misconception that people *outside* the PC market think that those *inside* it think PCs are great, but most business users tolerate them because of the lack of competitive alternatives. OS/2 is the only real alternative to Windows 3.1 or '95 and is still steadily gaining ground, despite IBM's lack of direction, post the Warp release. its only drawback is it doesn't come pre-installed and so you have to buy and install it yourself.

Apples are too expensive and X-terminals cost a small fortune. Soon the Internet terminal offering will compete in this arena, backed by the world's third largest software company, Oracle, with suitable marketing support, who knows, perhaps ARM or Digital will advertise the processor technology, in competition to Intel and use an equally irksome jingle.

The Microsoft PR machine is already at work, attempting to carry out damage limitation on this Oracle initiative, claiming they are already working on such a device and belittling its application. It is, after all, a very different perspective to the one that Bill Gates put forward in his book on the future of computing, even though he is now re-directing Microsoft effort with Windows '95 at the Internet and Java, away from his own grand vision.



Write to Acorn User, Media House, Adlington Park, Macclesfield, SK10 4NP. E-mail: auletters@idg.co.uk

The main difference between RISC OS and Windows is that the former is far more resource efficient. I recently saw a Pentium machine with 32Mb RAM display an AVI video and it regularly froze while the CPU processed the video data. This compares very badly with my Risc PC 700 5Mb system which displays Replay in various modes including multiframe, without a hiccup.

I am yet to be convinced that RISC OS has serious limitations, because lack of Virtual Memory Management and all the utilities that Windows provide to configure the system to your own needs. Graphics aside what application running, uses such vast amounts of memory, I can happily run *Impression* and *Artworks* together and in a corporate environment the last thing we need are users setting up their machines to personalise them, as this inevitably leads to a problem with support somewhere down the line.

The virtual swap file on a PC is sized optimally at 50% of the available RAM, if it is greater it favours disc access and slows the machine down. Also in the mode that the internet terminal operated, virtual memory is unnecessary because it doesn't have a hard disc.

The traditional market place for Acorn is the education market, however I am sure that schools are migrating to PCs because that is the operating system of the moment and to ensure that your schools' children are not prejudiced in the work environment then schools will use PCs. Last week in *Computing* a school defined as an "Acorn" school actually said as much to the PC audience. It is important therefore for Acorn to be seen at the sharp end of technology and gaining acceptance in the business community, before the schools user base migrates to end of the Microsoft dominated computer line.

Yes, I am an Acorn yuppie, I have had an A3000 4Mb system RISC OS 2 (couldn't afford the upgrade syndrome) for 6 years with 3 crashes running applications in that period. I now also have the 5Mb Risc PC 700 which has repeatedly been taken into work, to prepare management reports, as I find running *Impression* easier and more reliable than MS Word — and we don't have a comparable vector package to *Artworks* available.

This has created awareness of Acorn in a PC company. The only fault anyone finds with it is, well it's not really running industry standard software. But from the Finance Director down, people compliment the presentations produced. Unfortunately they do not question why, given their sophisticated word processor, it is the non-standard machine and software that produce better results.

I hope you appreciate the viewpoint and that the direction that Oracle may be taking Acorn will be more clearly debated in future issues. I personally feel that Oracle are unlikely to be a threat to the independence of Acorn as they have consistently avoided becoming associated with any specific platform, purchasing Acorn or part of ARM would remove this independence.

Roland Major,
Droitwich, Worcs

What's going on?

Over the last several months, I have read a number of debates over a variety of issues concerning the Acorn platform. In particular it's viability seems to be a particular hot-potato and I must say that I find it very difficult sometimes to either convince myself to stick and more importantly to convince others that it represents a wise choice — but I built my own car so that must put me beyond the main stream, so it's unlikely I'll switch.

What prompted this letter originated from those sources and also what I read in the February edition was sort of clarification on these issues. I must also add that my knowledge of any programming is zero and currently having just bought a copy of *Style*, I'm trying to establish myself in what it can do, so the layout may be shaky!

The article written by Jim Nagel in *Computer Shopper* concerns the Computer Concepts/C++ debate. It seems clear from the article that there are now two camps: those who say that the C++ absence is preventing any further development on software and those who say it's irrelevant.

The former camp seem to be those attempting to cash in on the mega sales of DOS-boxes (i.e., CC and Colton) and those who appear to be writing exclusively for Acorns. In fact the comment from the people at Oak stated it was irrelevant and an avenue not to go down. Now the question I ask is: Can someone tell me what's going on, as I haven't the faintest idea what this actually means? Yet it would seem to be quite important to follow this avenue as it surely affects everyone who owns an Acorn.

The other main part concerns what Charles Moir said in the article, which I would also like to know more about:

1. Windows '95 a better OS than RISC OS – if it needs a 16Mb Pentium and uses 50Mb of your hard disc to be a serious user and it's still 'full of bugs' (allegedly!) – I want to know why?

2. 'not much more business to be done on the Acorn side.' What do the likes of Beebug and Clares think?

3. 'the multiprocessor OS (Taos) is utterly irrelevant.' Explain please.

4. Windows NT with a Windows 95 front end is already available as a multiprocessor multithreaded OS will be 'the ultimate OS that will rule the world.' What does Larry Ellison think about that? Also is it possible to explain what a multiprocessor, multithreaded OS is, so that morons like me can understand?

The other important part of the article concerned the vast amount of space taken up by C++ programs. the comparison made between *Artworks* and *Xara Studio* quite staggered me and the consequences of adopting it are surely very significant? What comments do you have?

This seems to be the tip of an ideological iceberg. So would it make the basis for an article of series for dimbos such as myself? Or am I tempting fate at instigating a mass exodus towards dosland?

I only hope I haven't started a huge tangential debate, that's not my intention only to ask serious questions that others are hopefully also asking. I also hope you can give some comprehensive answers for which I thank you in advance.

Tony Evans,
Huntingdon, Cambs

Taking your main questions in turn:

The only way to judge the true value of an operating system is in terms of computer power delivered to the user. There has been no analysis of Windows '95 with respect to other OSes therefore it's all opinion. However many users have gone back to Windows 3.1 after having tried Windows '95.

The interview you refer to took place before all the latest upheavals in the Acorn market so the answer is probably meaningless. I don't think anybody really knows what's going to happen, it's all pretty exciting though.

Multiprocessor OS irrelevant? Well, a multiprocessor OS will deliver more raw power, some applications will benefit, others won't. A word processor will not be affected much, a DTP or image processor will eat the power.

Multiprocessor, multithreaded Windows '95? First off, multiprocessor means exactly that, in practical terms it should mean more power, multithreaded actually refers to an particular application having more than one thing going on inside it at one time, so a multiprocessor multithreaded OS can do more than one thing at a time on more than one processor. As far as Win'95 itself goes, just refer to my comments on your first question.

The C++ argument is fairly spurious, I believe. It is quite practical to write programs in C (obviously) it's just easier to write big programs with hopefully fewer bugs in C++. However it still comes down to the programmer in the end. A bad programmer will write bad C++ with the same alacrity as he'll write bad C (or bad Basic or bad anything else).

It would be nice to have a fully functioning C++ instead of the incomplete substitute of CFront, but it's not the end of the world.



> We were originally doing very well because we could easily undercut Macs and PCs. The problem came around late 1993 when these two rival systems came crashing down in price.

As an ex-art student, I know that 3D design students always have to design a park bench as part of their undergraduate course. I have often wondered why, and today I find out: Aaron Timbrell of iSV lets me into the secret.

'I originally studied Industrial Design at South Glamorgan; this was when Acorn released the 32-bit machine – in fact I bought one of the original A310s. The first computer I had was in 1981 – a Commodore Vic 20. I thought it was brilliant because it had colour and sound, wow! At the time most computers were monochrome and went 'bip' (like 'beep' but even weedier).'

Aaron eventually blew his early BBC due to some over-ambitious electronics. His A310 was pressed into service at college for rendering his designs using Silicon Vision's *SolidCAD*. This was all done on a 1Mb machine with a floppy disc drive and no hard disc; Aaron wrote all his own compression routines to squash the files down, and allow him to run an animated demo off a floppy.

'At the time there were only two Apple Macs and a grotty printer in the design faculty. It was amusing to watch people trying to use these 'serious design machines', knowing that I could go off home and do full-colour renderings on my little A310.

Aaron graduated in the late eighties, the recession was on the horizon and basically there were no jobs in design.

'I went through a couple of naff jobs: one restoring VW Beetles and one working for BT in the 'total quality management' division, which shut after six months. I was lucky, because I had been sending off CVs, making a nuisance of myself and actually got a design job. One of the things I was asked to do was to design photo-booths, but when the designs were showed to the clients they said 'No'.

Ghosts from Aaron's past jobs have occasionally returned to haunt him. 'When my wife and I were jetting off for our honeymoon from Gatwick the plane was delayed. I can't sit still for a minute, so I went wandering and there round the corner waiting for me was my photo-booth. It was my design, except that the company had missed off the kitsch green marble that I had used. I took a photo of it there and then; the first photograph on my honeymoon' And they say romance is dead.

Aaron's next job was for the Electronic Font Foundry (EFF), where he got his grounding in business. He put together the original Acorn DTP system for EFF, which sold in respectable numbers to small printers.

Sensing an opening in the market, Acorn decided to set up a DTP sales operation itself, an area axed in Acorn's recent rationalisation. Aaron was not impressed: 'Acorn's attempt to sell DTP systems to the professional market was a complete waste of space. It was misguided load of old tat. I was not the only person selling systems at EFF and I know that I personally sold more publishing systems than the whole of Acorn's professional sales department.

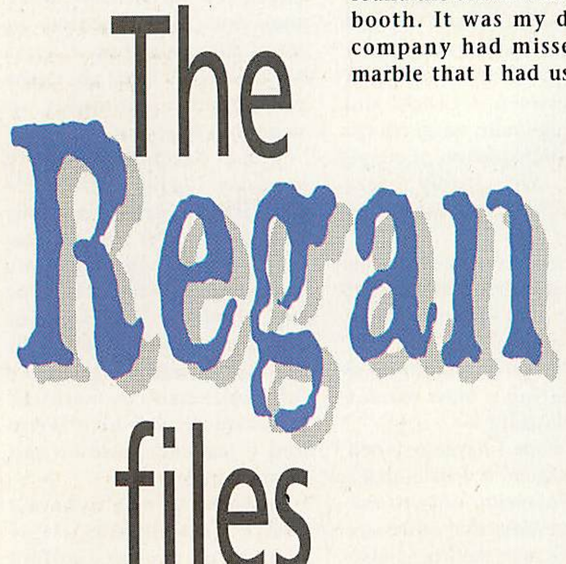
'We were originally doing very well because we could easily undercut Macs and PCs. The problem came around late 1993 when these two rival systems came crashing down in price. We just could not sell Acorns any more as Macs and PCs had 24-bit colour, so EFF had to give up on the Acorn systems.'

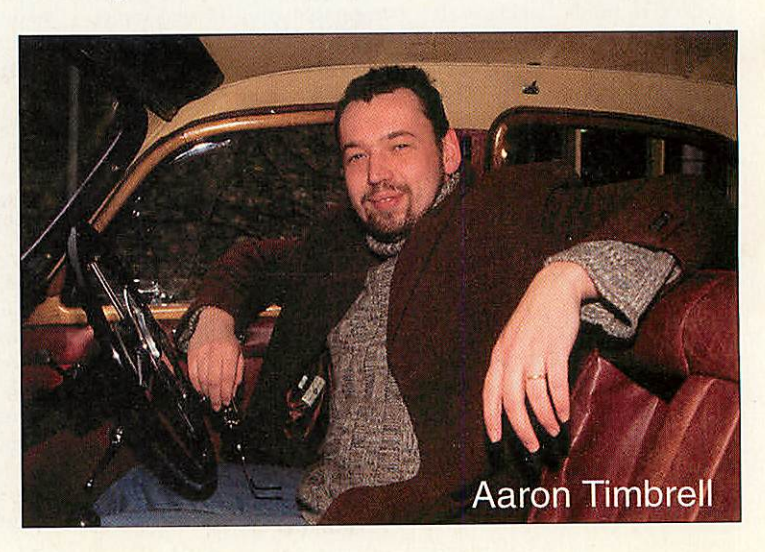
Once again out of a job, Aaron decided to try to sell his own programs, including *X-Stitch* which he had already written for his wife Hayley.

'I think what is wrong with a lot of companies is that they only start with one program which is a success but it is limited by the size of the Acorn market. When the orders start slowing, they are stumped. My idea was to have more than one product line in more than one area. I had a three-year plan for iSV: in the first we would make a loss, the second break even, the third make a profit. In fact we made a profit in the first year, and I'm now into the second; January was a good month and sales were up on last year'.

And the reason for making students design park benches? It's because public furniture is particularly hard to design. It needs to be to be functional, aesthetically pleasing and vandal-proof. Many people would say the same about software – perhaps Aaron's design training has some bearing on iSV's success.

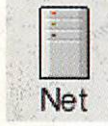
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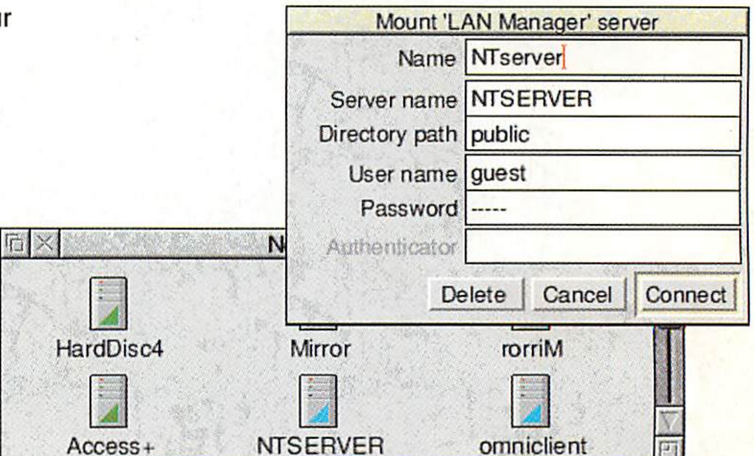




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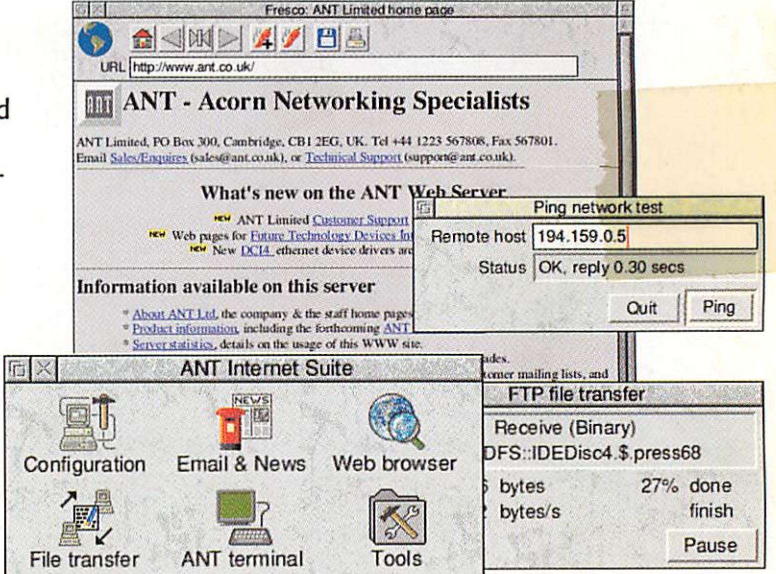
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The ANT Internet Suite is available now at £99 plus VAT for a single-user licence. Contact us to discuss site licence requirements.



Don't forget that ANT produces one of the widest ranges of Ethernet networking hardware for Acorn RISC computers. Our low-cost interfaces are installed at thousands of sites across the UK.

Cards are available to fit all Acorn RISC computers and are offered with a combination of connector types including 10Base2, 10BaseT, and 10Base5.

Our distributor Atomwide and our dealer network are able to offer advice on choosing the right cards and designing your network, and an installation service is available.

Contact Atomwide directly on 01689 814500 for more details.



For further information on all ANT products including price and availability, dealers, distributor and licensing information, please contact ANT Ltd using one of the following methods:

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